
R E P O R T

ON THE

ADMINISTRATION OF THE PROVINCE OF PEGU,

FOR 1860-61.

REPORT

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SECTION I.—INTRODUCTORY.

1. THE present Report refers to the local administration during the eighth year of British rule in Pegu. In Statement A of the Appendix will be found the general statistics of the Province for the year under review. The Report includes information in the Sections devoted to Revenue and General Affairs brought down to 30th April 1861.

SECTION II.—JUDICIAL.

CIVIL JUSTICE.

2. The number of Civil Suits, original and appellate (both regular and miscellaneous), instituted in the Courts of the several Districts of the Province during the past two years, was as follows:—

	1859.	1860.
Appeals	960	740
Original Suits	23,295	21,365
Miscellaneous	3,400	3,126

Showing a decrease of 220 appeals, and of 1,930 original, and 274 miscellaneous cases. This decrease is to be attributed mainly to the introduction of Stamps on Law Papers from the 1st June 1860.

3. Major Sparks, Judicial Deputy Commissioner of Rangoon, and Mr. O'Riley, Officiating Deputy Commissioner of Bassein, concur in thinking that this measure has not been attended with any prejudicial results.

The former in his Annual Report says:—

“ I do not consider that this measure has, to any extent, interfered with the resort
“ of real applicants for justice to the Courts. It has acted rather, I believe,
“ beneficially in diminishing hasty, ill-considered litigation, by imposing a check on
“ the institution of vexatious suits by plaintiffs, and on refusals by defendants to pay
“ their just debts, until compelled by judicial process, practices which the former
“ excessive cheapness of our Courts had a tendency to encourage.

“ In the lowest class of suits, that is to say, those for amounts not exceeding
“ 16 Rupees, of which a large number are preferred before the Myookes, the expenses
“ are actually less now than formerly. For before a fee of 1 Rupee was charged for
“ each summons, 8 annas for each subpoena, and 2 Rupees for each warrant : whereas
“ now, the stamp on the plaint, 4 annas, where the suit does not exceed 8 Rupees :
“ 8 annas where it does not exceed 12 Rupees ; and 1 Rupee where it does not exceed
“ 16 Rupees—includes every thing in the shape of fees, and the expenses of the suit
“ remain as formerly. The poorest classes, therefore, so far from being prevented by
“ the Stamp Law from obtaining justice, are actually assisted by it.”

Mr. O'Riley writes:—

“ The only way to account for this decrease is to attribute it to the operation of
“ the Civil Code and its consequent repellant to expensive litigation—the Stamp enact-
“ ment. Enquiry confirms this supposition and the range of probabilities support it,
“ for it cannot be owing to a less active disposition to litigate on the part of a popula-
“ tion, which, in common with all Asiatic races, although perhaps in a less degree,
“ possess the propensity to seek Court justice on the most trivial pretexts.”

4. In table B of the Appendix will be found a complete statement of all suits
Reference to Appendix B pending from last year, instituted and disposed of during the
year, and pending at the close in each District.

5. The number of cases pending at the close of 1859
Number of Cases pending. and 1860 respectively was as follows:—

	1859.	1860.
Appeals ...	330	53
Original Suits..	487	244
Miscellaneous ...	90	80
	<hr/>	<hr/>
Total	907	377
Decrease		530

Being 6·2 per cent of the appeals instituted during the year, 1·1 of original suits, and
2·8 of miscellaneous cases.

6. The following table shows the general nature of the suits instituted in each District during the year, and their amount or value of the property in litigation :—

Districts.	Debt.	Diversity.	Land.	Other regular Suits.	Total regular Suits.	Execution of Decrees and Miscellaneous.	Value of Original Suits.
							Rs.
Rangoon	1,101	278	456	2,216	4,051	1,021	14,87,183
Bassam	3,771	1,241	171	171	5,354	592	9,67,542
Proper	1,170	1,008	84	697	4,359	915	2,67,520
Henzada	1,180	521	1,367	1,093	4,161	157	1,51,271
Tharawaddy	612	393	186	111	1,302	80	36,256
Toungoo	871	122	183	179	1,355	361	1,08,387
Total	9,176	3,979	5,187	5,993	21,365	3,126	21,21,109

Or nearly a quarter of a million sterling ; of this sum 11,66,275 Rupees, or very nearly half, are the value of suits instituted in the District Court of Rangoon alone.

7. Tables C and D in the Appendix show in what proportion the various classes of the population of the Districts of Rangoon and Henzada resort to our Courts. The latter may be taken as a fair average district, the bulk of the population consisting of the original inhabitants, with a comparatively small admixture of the foreign element ; whilst the former District, with its Capital, Rangoon, has undergone a great change since the annexation of the country from the extensive immigration of settlers from all parts of the world.

Major Sparks, in commenting on the return for Rangoon, writes :—

“ The percentage of litigants to the number of each race in my own and the ‘Tseetkai’s’ Courts (that is to say, within the Town and Suburbs of Rangoon, where the census has recently been taken with such care and accuracy, as to afford reliable data for the calculation,) is as follows :—

	Number of the Population of the Town and Suburbs of Rangoon, as shown in the late census	Number per cent engaged in litigation
Europeans	784	52.5
Burmese	47,055	1.6
Natives of India	6,986	16.1
Chinese	1,509	2.4
Total	56,334*	4.1

* This includes the adult floating population of the Town of Rangoon.

"The way in which the Chinese keep out of our Courts is highly creditable to them. It is true that among themselves their disputes are referred to their secret Societies, but in their numerous and heavy commercial transactions with other races, it is only probity in their general dealings and fulfilment of their engagements that can save them from being summoned as defendants before our Civil tribunals very much oftener than they are.

"The Burmese in Rangoon are comparatively poor, and their trading operations insignificant. It is partly owing to this, partly to their custom of settling their disputes by private award of elders and respectable persons, but principally to their large numbers, and Karens, Shans, and other tribes, who scarcely ever appear in our Courts, being massed with them, that they appear as the least given to litigation of any of our population.

"The European percentage is extraordinarily high.

"The natives of India, it is evident, bring with them across the sea that passion for litigation which distinguishes them in their own country."

8. Table E in the Appendix shows the comparative Working of the Civil Courts.. working of the Civil Courts in the several Districts.

9. The average duration of suits is very satisfactory in the Districts of Rangoon, Toungoo, and Tharawaddy, less so in Henzada, and greatly too high in Bassein, where steps will be immediately taken to accelerate the action of the Courts.

The same comparative results are shown in the longest period any case has been on the file, except in the District of Prome, where cases, both on appeal and original, have been allowed to remain too long on the file.

10. The following statement shows the number of original suits decided by each class of Judicial Officers in each District. The Burmese Judges decided 20,012 suits, and the British Judges 1,596 :—

DISTRICT.			By Deputy Commissioner.	By Assistant Commissioner.	By Extra Assistant Commissioners.	By Tsetkaia.	By Myookes.	Total number of Suits.
Rangoon	...	...	478	30	28	1,468	2,431	4,435
Bassein	...	...	43	199	417	845	4,165	5,669
Prome	...	...	.....	39	53	1,330	2,975	4,397
Henzada	...	...	17	30	19	677	3,503	4,246
Tharawaddy	...	...	8	.....	4	405	1,099	1,516
Toungoo	...	...	172	.....	87	546	540	1,345
Total			718	298	608	5,271	14,713	21,608

11. The results, as shown above, are favorable to the state of the Civil Courts generally in the Province of Pegu. The District Court of Rangoon is more especially entitled to commendation.

Results favorable.

12. In Appendix F will be found the return of Civil Suits instituted and disposed of in the Court of the Commissioner. Seventy-seven cases of every description were disposed of, and 13 were pending at the close of the year.

Suits in Commissioner's Court.

SECTION III.—CRIMINAL JUSTICE.

13. In the Appendix, Statement marked G, will be found a table, showing the number of persons apprehended on criminal charges in each District, and how they were disposed of. The proportion of convictions to those brought to trial was (omitting fractions) 62 per cent. The number of prisoners remaining under trial or committed to the Sessions at the close of the year was 191, or less than 1 per cent of those brought to trial. This is a manifest improvement on the working of the Criminal Courts in the previous year. Over 15,000 witnesses were examined during the year, of whom three-fourths were detained one day. In the District of Bassein the detention was excessive, and the attention of the Deputy Commissioner has been called thereto.

Statistics of the number of Prisoners brought to trial.

14. The administration of Criminal Justice in the Districts Courts during the year has been prompt and efficient.

Criminal Justice promptly administered.

15. There were 42 appeals in criminal cases to the Commissioner's Court during the year. In these the sentences of the lower Courts were confirmed in 38 cases; 3 sentences were reversed, and 1 case was pending at the close of the year.

Appeals in Criminal Cases.

16. In the Sessions Court 77 prisoners were put on their trial. Of these 53 were convicted, 24 were acquitted, and 17 remained under trial at the close of the year. The number shown as under trial at the end of the year includes those prisoners at out-stations, who can only be brought to trial when the Court is held in the District where they have been committed.

Trials in the Court of Sessions.

Sentences in Sessions Court.

17. The following statement shows the sentences passed on prisoners convicted:—

								<i>Number of Prisoners.</i>
Death	...	...	...	...	...	...	...	7
Transportation for life			...	...	...	...	...	10
Imprisonment for 14 years			...	...	...	...	...	2
Ditto	9	„	...	...	...	...	...	10
Ditto	7	„	...	...	...	...	...	3
Ditto for periods less than 7 years				...	..	..	...	21
Total								53

18. In the Criminal Courts of Pegu, the evidence, whether in heinous or petty cases, is recorded by the presiding Officer. British Magistrates record in English, and Burmese in their Vernacular. All examinations of witnesses or communications to prisoners are made by the Magistrate or other Officer personally. The results of appeals of criminal cases show that the findings and sentences of the Courts of first instance are very seldom erroneous.

SECTION IV.—POLICE.

19. In the Reports for previous years it has been stated that the Police Force in the Province of Pegu consisted of disciplined Police battalions; of armed boats for the rivers, creeks, and lagoons; of constables under superior officers in the towns; and of goungs or head constables in the villages. The Police Force remained unaltered during the year 1860, but towards the end of that year a commencement was made in establishing an organized Constabulary. The account of carrying out that measure will belong to the Report on the Administration for 1861.

20. The present Report on crimes in the Province of Pegu will therefore refer to the last year of the existence of the old Police. In Statement H of the Appendix will be found a return, showing the nature and the number of crimes ascertained to have been committed in the several Districts of the Province during the year.

<i>Crimes of the first class, or those attended with murder, or wounding with intent to murder.</i>						1859.	1860.
1. Murder	...	...	...	...	...	25	22
2. Gang robbery on land and rivers	...	...	...	...	...	13	18
3. Highway robbery	...	...	...	...	...	2	1
4. Burglary	...	...	...	...	...	0	3
5. Theft	...	...	...	...	...	0	1
6. Cattle-stealing	...	...	...	...	...	0	1
7. Wounding with intent to murder	...	...	...	...	...	10	5
Total						50	45

21. In the margin is given a comparative statement of the number of crimes of the first class of atrocity committed during the two last years.

The cases of simple murder do not present any unusual features, the motives which led to them are:—

						<i>Cases.</i>
Plunder	...	...	...	...	...	4
Jealousy	...	...	...	...	...	2
Revenge	...	...	...	...	...	1
Rage	...	...	...	...	...	1
Insanity	...	...	...	...	...	3
Bailing out of jail	...	...	...	...	...	1
Not ascertained	...	...	...	...	...	10
Total						22

Of these, 10 or nearly half are in the Rangoon District. Four of the 10 are cases of suspicious death, and it is not certain that they are really murder cases. The same remark applies to 2 out of the 3 cases in the Prome District.

Of the 12 dacoities with murder, 9 occurred in the Prome District, and as was the case in previous years, the gangs came from the Burmese Territories. There has, however, been no incursion across our Frontier this year on a large scale, like those in former years.

<i>Crimes of the second class of atrocity.</i>						1859.	1860.
1. Culpable homicide	...	...	...	...	...	10	6
2. Gang robbery with wounding	...	...	...	...	...	26	36
3. Highway robbery with ditto	...	...	...	...	...	3	3
4. Burglary with ditto	...	...	...	...	...	4	2
5. Theft with ditto	...	...	...	...	...	1	5
6. Cattle-stealing with ditto	...	...	...	...	...	0	0
7. Assault with ditto	...	...	...	...	...	44	27
8. Arson and incendiarism	...	...	...	...	...	11	15
9. Rape	...	...	...	...	...	44	41
10. Affray or riot with violent breach of the peace	...	...	...	...	...	9	4
Total						152	129

22. The number of crimes of the second class of atrocity is noted in the margin. Gang robbery with wounding has increased. Of the 36 cases 23 have occurred on the Frontier

District of Prome, and 9 in Henzada.

The reported cases of rape are nearly all fictitious, and require no particular remark.

<i>Crimes of the third class of atrocity.</i>							1859.	1860.
1.	Gang robbery on land and rivers	...	...	...	...	...	241	129
2.	Highway robbery	...	...	...	...	...	39	40
3.	Burglary	...	...	...	...	...	112	99
4.	Theft	...	...	...	...	...	1,997	2,018
5.	Cattle-stealing	...	...	...	...	...	257	168
Total							2,646	2,454

23. The crimes of the third class of atrocity have much decreased during the year, especially land and river dacoity, and cattle-stealing, the two

special crimes which have heretofore been so rife in Pegu.

<i>Crimes of the fourth class of atrocity.</i>							1859.	1860.
1.	Receiving stolen property	...	...	...	...	...	63	56
2.	Child-stealing for selling into slavery or other illegal purposes	...	...	...	...	...	2	3
3.	Counterfeiting coin or uttering base coin	...	...	...	...	...	3	6
4.	Forgery	...	...	...	...	...	5	6
5.	Perjury	...	...	...	...	...	31	30
6.	Adultery	...	...	...	...	...	48	26
7.	Attempts to commit any crimes of the preceding classes	...	...	...	...	...	55	64
Total							207	191
<i>Crimes of the fifth class.</i>								
All crimes not specified in the preceding classes							9,599	8,858

24. The crimes of the fourth and fifth classes are shown in the margin; they do not call for any remark.

25. From Statement G of the Appendix, it appears that out of 22,292 persons supposed to have been concerned in crimes of every description, 20,593 were arrested and brought to trial. Of these 12,898 were convicted, 7,357 were acquitted, and the rest were otherwise disposed of, or were still under trial at the close of the year. The number of convictions was 1·2 in 100 of the whole population.

The property stolen or plundered amounted to 1,65,495 Rupees, of which only to the value of 36,328 or 22·6 per cent was recovered.

On the whole there has been a satisfactory diminution of crime during the past year, as follows :—

Proportional decrease in 1860.

Crimes of the 1st class	...	...	10	per cent.
Ditto 2nd ditto	...	...	8	ditto.
Ditto 3rd ditto	...	...	9	ditto.
Ditto 4th ditto	...	...	9	ditto.
Ditto 5th ditto	...	...	9	ditto.
General decrease of crime	...	...	9	ditto.

The general state of each District, as regards heinous crimes, during 1860, as compared with the previous year, may be thus epitomized :—

Rangoon	Satisfactory improvement.
Bassein	Great improvement.
Prome	Great improvement.
Henzada	Considerable improvement.
Tharawaddy	As little crime as last year.
Toungoo	Returns for 1859 not to be relied on; but in Toungoo there is not much heinous crime.

26. The amount raised during the year for the support of Municipal Police in the several districts of the Province has been as follows :—

Rangoon Town and District	41,658
Bassein	14,659
Prome	19,816
Henzada	14,934
Toungoo... ..	3,662
Total, Rupees	94,729

At the close of the year there was a surplus of 19,676 Rupees arising on the funds of the several Towns, except Rangoon, where there was a deficit.

SECTION V.—JAILS.

27. The Jail buildings in the Province of Pegu have remained in the same state as when last reported on. The Rangoon Jail is the only one which can be regarded as a permanent structure. The wards are divided off with partitions, by which prisoners may be and are duly classified. The Jail enclosure, which has an area of fifteen acres, is surrounded by a wall 22 feet high. The Jails at Mengyee (Tharawaddy) and Prome are also enclosed by brick walls. The other Jails have only bamboo stockades. The wards of the Rangoon Jail are spacious buildings of teak plank. The floors are raised from 6 to 8 feet from the ground. The remaining Jails of the Province are, for the most part, constructed of bamboo mat walls, with plank flooring, raised from 2 to 4 feet from the ground.

28. A full day's labor for the convicts of all the Jails has been enforced, as far as is possible, while out-door labor is carried on. At some Stations, Prome in particular, the convict labor has been turned to good account for the improvement of the Towns, by drainage and the filling

up of swamps. Still convict labor can never be efficiently superintended and thoroughly exacted, except within the Jail wall. That plan is now carried out as far as is practicable, but it has not yet been found possible to establish Jail manufactures, or to carry on in-door labor generally throughout the Jails of the Province. In all the Jails strict attention is paid to the maintenance of discipline among the convicts.

29. No attempts have been made to instruct the convicts in reading and writing.

Education among Convicts.

The following are the proportions of each race in Jail who were found able to read or to write, or who could do both:—

	Proportion of convicted Prisoners in Jail in 1860.
Burmese.....	65.98
Karens	25.00
Chinese	57.70
Other Asiatics	71.00

General statistics of cost, &c.

30. The statistics of cost, of mortality, and of escapes in all the Jails were as follows:—

JAILS.	Average No. of Criminal Prisoners daily throughout the year, including females and non-laboring convicts.	Number of deaths during the year.	Proportion of deaths to strength per cent, omitting fractions.	Cost of each healthy Prisoner for every thing during one year.	Cost of each Sick Prisoner for every thing during one year.	Number of Escapes.	No. of Re-capture of Prisoners escaped in this and in previous years.	REMARKS.
Rangoon	643	33	5 per ct.	116 10 6	144 2 3	3	1	Average cost of each prisoner is Rs. 89-2-6, per head per annum.
Bassein	389	45	11 "	74 7 10	79 6 7	19	11	
Prome	285	32	12 "	85 9 4	79 9 8	1	2	
Menzada	316	24	7 "	67 5 8	66 10 5	6	3	
Tharawaddy	190	7	3 "	103 1 10	63 6 3	8	8	
Toungoo	134	23	17 "	93 9 10	80 12 11	2	6	At Toungoo, 4, who, escaped in previous years, were re-captured.

31. In all the Jails, except those of Rangoon and Tharawaddy, the cost was moderate. At Rangoon it was extravagantly high, and much more than it should have been. The excess is attributable to the high charges of the contractor for food, which has necessitated an entire change of system. In the Tharawaddy Jail the high cost has not been satisfactorily explained, and attention has been drawn thereto.

32. The proportion of deaths to strength shows a considerable improvement over the mortality of the previous year. Still the mortality is very great in some of the Jails, especially in Toungoo. Three-fourths of the deaths in that Jail were caused by dysentery and diarrhoea.

Remarks by Dr. Cowie on the Prome Jail.

33. In a carefully prepared Report upon the Prome Jail Hospital, by Dr. Cowie, the Civil Surgeon, he observes:—

“The chief mortality during the year arose from bowel complaints and atrophica. . . . The majority of these cases were the result of exposure and privations previous to incarceration. . . . The prisoners improve in condition wonderfully under the Jail discipline, and the care and attention they receive. The prisoners . . . are the lowest, poorest, and most vagrant classes, therefore the most squalid and sickly of the whole community. Not a few come from beyond the Frontier, and are frequently diseased and broken down in constitution.”

Convicts sent to Andaman Islands.

34. During the year 100 prisoners have been drafted to the Andaman Islands, there to work out the periods of their sentences.

SECTION VI.—REVENUE.

35. The Revenue demand for the year 1860-61 exhibits an increase on nearly every item. The following is a comparative statement of the demand for the years 1859-60 and 1860-61, omitting fractions:—

ITEMS OF REVENUE.	DEMAND.	
	1859-60.	1860-61.
Land	12,62,283	13,54,394
Capitation Tax.....	9,15,099	9,75,249
Fisheries	3,97,294	4,10,961
Salt	64,188	55,876
Forest Produce.....	1,588	1,323
Excise	4,52,419	3,60,816
Sea Customs	4,52,086	6,57,924
Inland Customs ...	5,14,865	5,78,971
Port Dues and Marine Receipts	95,290	1,23,508
Timber and Miscellaneous Proceeds of the Forest Department ...	2,36,617	2,49,752
Fines and Fees on criminal processes...	1,51,870	1,14,166
Sale of unclaimed property...	7,429	7,408
Postage Stamps ...	16,265	19,810
Stamps on Civil Suits and Law Papers (only stamps) ...	.....	88,351
Income Tax up to 30th April 1861 ...	.....	1,29,364
Miscellaneous	32,866	15,298
Karen Chiefs' Tribute	3,874	3,874
Total, Rupees	45,88,705*	51,52,035

Note.—Rent on town-building lots in Rangoon has now been transferred to the statement of local taxation.

* Rupees 1,187 were subsequently demanded in 1859-60 beyond the amount shown in the demand statement for that year.

Land to the amount of 5,313 Rupees was sold in the Town of Rangoon during 1860-61, and at Bassein to the amount of 310 Rupees.

The following is the amount of local taxation not included in the Imperial revenue :—

ITEMS.	1859-60.	1860-61.
Municipal Tax	80,203	94,729
Bazar Rents	25,587	47,610
Ferries	2,892	3,532
Rent on Town Lots	63,226	63,323
Total, Rupees ...	1,71,908	2,08,194

The increase in nearly every item of revenue will be at once apparent. The new taxes which appear are Income Tax and Stamps upon law papers. All other taxes remained as before, except that the rates upon land were increased in some of the circles of the Rangoon District.

LAND REVENUE.

36. The year was favorable for agriculture. An increase occurred in the cultivated area of almost every District of the Province, but principally in Rangoon, where 36,000 additional acres appear on the rent-roll. This increase is partly due to the re-arrangement of the rates per acre during 1859-60, on the plains where paddy is cultivated; and which plains are called in the language of the country "Queng." The rates were in many cases raised, because the land could well bear higher rates than those existing. More land has also been taken up, and new land, cultivated in former years tax free, has become liable to assessment. All these causes contribute to produce the increased revenue of the year under review.

37. During the past season the operations for the re-adjustment of the rates of land tax per acre, and for the granting of ten-year leases to land-owners, have been carried on by Captain A. R. McMahon. Under the former plan over 100,000 acres of cultivated land have been surveyed and assessed according to their productiveness and position. The increase of annual revenue on that cultivated area, arising from the higher rates per acre, which the survey and inquiry showed the lands would bear, will amount to nearly 20,000 Rupees. Leases for ten years have been granted on 14,000 acres. But as leases were offered on the whole area surveyed, that is, 100,000 acres, it is evident that the land-owners have not generally been anxious to accept them.

...the ... is held ... and the ... is ...
 ... the ... is ...
 ... the ... is ...
 ... the ... is ...

On the objections of the land proprietors to accept leases, ...
 ... remarks:— "The chief drawback is the ...
 ... denotes that a great many of the cultivators have lost ...
 "intentions of Government and in their own ability either to work land ...
 "at present have, or to agree among themselves in the event of a lease ...
 "The next I believe to be the reprehensible conduct of the Thengyee ...
 "cultivators to abandon their land at discretion, with impunity. ...
 "there is little waste land available, or where the land now tilled is poor or liable to be
 "swamped, the people will not accept leases even on the most advantageous terms.
 " * * * The nomadic habits of several of the settlers in the Delta ...
 "as people to whom a lease would be a boon." In other words, the majority of culti-
 vators consider it better to work on from year to year paying Land Tax on the ground
 they actually till, to undertaking to pay annually for a term of years a fixed sum on an
 area which they feel uncertain whether they shall be able to till or not.

40. In the Report of last year it was stated that the cultivators of the country
 Market price of Rice in refused to sell their rice, except at very high prices. The
 1860-61 low. harvest of 1860-61 was very plentiful; the consequence has
 been that, notwithstanding a considerable increase in the export of rice during the early
 part of 1861, prices have been lower. The average price of cargo rice for 100 bushels,
 during 1859-60, was 147 Rupees; in 1860-61 it was 102 Rupees.

Quantity exported. 41. The export for the two years has been as follows:—

	1859-60.	1860-61.
Reported	Tons.	Tons.
By sea ...	40,847	60,263
By river ...	39,606	53,171
Total ...	80,453	113,434

The greater portion of the grain sent by river is unhusked, so that the quantity
 does not represent the same amount of grain as that exported by sea, which is all
 husked rice. But in addition to the quantity sent by river, which passes through ...
 ... from 10 to 12,000 tons of unhusked rice are ...

CAPITATION TAX.

42. The amount of increase in this Tax is considerable, being about 6½ per cent on the collections of last year. This increase is not due to the rates of Tax having been raised, for they remained, during 1860-61, the same as in previous years, but to an increase of population and more accurate returns. New settlers in Pegu are exempt from payment of Capitation Tax for five years, so that the increase does not arise from any great addition to the population by immigration during the two last years.

Increase in the Capitation Tax.

FISHERIES.

43. There has been a small increase upon the fisheries. This is gratifying, as pains have been taken to reform abuses which formerly existed in the leasing of fisheries, and it was rather desired to lower the amount received than otherwise. The object kept in view has been to give to the inhabitants of villages in the neighborhood of fisheries the preference as lessees, instead of allowing them to be annoyed by mere speculators out-bidding them; and to define the boundaries of fisheries, so as to leave free for the poorer classes all small streams and such implements of fishing as are used by individuals for taking fish for their private consumption, and not for sale.

Increase upon Fisheries.

SALT.

44. There is a decrease upon this item of revenue. The Excise Duty upon the manufacture is very small. It is not more than from 2 to 3 per cent on the value of the article.

Decrease on Salt.

EXCISE.

45. There is a considerable decrease on this head. The Excise Revenue is derived from the consumption of opium, spirits, and other liquors. The loss has occurred on the quantity of opium heretofore supplied to the farmer at the regulated price. This loss was foreseen, inasmuch as it became known that the quantity taken by the former could not possibly be required for consumption within the Province. It was strongly suspected that the surplus was exported either to the Straits or to the Siamese Coast. Measures were therefore taken for regulating the quantity supplied to the former for the local consumption: hence the diminution in the local Excise Revenue.

Diminution in Excise Revenue

TIMBER.

46. The amount realised by the sale of timber, by fees on permits to work forests, and other ways and means, was 2,49,752 Rupees, which is a small increase on the revenue of last year. The increase arose from the timber brought down to market being of a larger size than that of the previous year. The details of the administration of the Forest Department will be found in Section XVII.

Timber Revenue.

CUSTOMS.

47. There has been a considerable increase in the Customs Duty, both by sea and land—the total increase is 2,75,000 Rupees, or £27,500. This increase is caused principally by a greater quantity of goods being imported from the United Kingdom, and partly also by the higher rate of duty on cotton twist, which took effect in March 1860. The increased export of rice also swelled the amount of duty.

48. The Inland Customs showed an increased amount, solely from the augmentation of goods imported and exported. The trade returns of the year show an increase in quantity and value, although commerce has, on the whole, been considered to have been somewhat depressed during the year. The value of imports and exports by sea and on the Frontier for the two last years was as follows :—

1859-60	Rs. 2,87,98,658
1860-61	„ 3,05,63,292
	or £2,879,865 for 1859-60
	„ £3,056,329 „ 1860-61

In Statement I of the Appendix will be found a complete return of the value of the principal articles of import and export.

INCOME TAX.

49. The amount of Income Tax shown in this return is that due for the nine months ending 30th April 1861. The amount, that is, 1,29,000 Rupees, includes all that is actually payable into the Treasuries of the Province of Pegu, under the four schedules of Act XXXII. of 1860. It does not include the deductions from the pay of Officers of the Army present in the Province, nor deductions from Officers of the Department Public Works, nor of the Electric Telegraph Department. The Tax has yielded fully as much as was anticipated throughout the Province. It only took effect in the Chief Towns.

STAMPS.

50. During the year Stamps upon plaints in Judicial cases and law papers were introduced; the amount realized is slightly below what was anticipated.

There is no other item of revenue which appears to call for remark. The Port Dues and Marine Receipts will be specially noticed in the Section devoted to Marine affairs.

SECTION VII.—EDUCATION.

51. The Government School at Rangoon was carefully inspected and reported on by the Local Committee during September 1860. There were 38 scholars. All studied the English language and also Burmese. Payment of fees had been introduced during the last half of the year. Of the head class, consisting of 7 boys, of the average age of sixteen years, Major Sparks reports as follows :—

“ I cannot say that I am satisfied with their attainments generally, or even with their progress, since I examined them twelve months ago. I then had reason to find fault especially with their deficiency in arithmetic. I set the class a very ordinary sum in Rule of Three: only two succeeded, after several failures in doing it at all.”

52. The Committee recommended that the School should be discontinued, and the amount allowed for the establishment be disbursed in grants-in-aid to various private Schools in the Province. By this plan the Committee considered that the cause of education would be more effectually aided than by maintaining the Government School.

53. At Rangoon the Schools which receive grants-in-aid from Government are the Karen Normal or High School, which is under the superintendence of Mrs. Vinton, and a Pwo Karen Mission School under the Reverend Mr. Brayton. At the examination held in September 1860, the number of pupils at the former was 120, of whom half were in the English and half in the Vernacular Department. The first class was examined in English grammar, mental arithmetic, elementary astronomy, and chemistry. In all these, especially in arithmetic, for which the Karens display a marked natural aptitude and partiality, the different classes acquitted themselves satisfactorily.

54. The above Report refers to the School for the Sgau Tribe of Karens. During the year a separate School was established for the education of Pwo Karens. To this a portion of the original grant-in-aid to Karen Schools in Rangoon has been devoted. The daily average attendance of pupils was 44. No public examination has yet been held, but the progress of the School is believed to have been satisfactory.

In the Toungoo District education among the Karens is well maintained. The number of pupils attending the Young Men's Normal School, at the City of Toungoo, was 80. In consequence of the absence of Mrs. Mason in the United States, the School for female instruction was not in operation during the year.

56. The number of Village Schools in the mountains was 135, having 2,253 scholars. These are all well supported by the Chiefs and people. A teacher has been established in the Western Karen-nee State, where he appears to be well received.

57. At the Station of Henzada there is a Karen Normal School for male and female pupils, under the charge of the Reverend Mr. and Mrs. Thomas. During the past year the average attendance was 4 Burmese and 55 Karens. The School received 1,158 Rupees in voluntary subscriptions. Considerable progress has been made in arithmetic. The first class have gone through the rules of proportion, cube-root, and mensuration. In geography and natural philosophy they are well advanced. Vocal music has also been introduced as a branch of study.

58. In the interior there are 50 Village or Primary Schools, in which elementary knowledge is taught. A commencement has likewise been made to establish Schools of a higher order than the Village Schools. These, it is proposed, to establish within circles containing several villages, and so to render less necessary a resort to the distant City School. The Reverend Mr. Thomas concludes his Report thus:—

“ We do not feel the importance of teaching the Karens English. We feel more and more wedded to the Vernacular language. In the language of the people we find scope for all our energies.”

59. In the Basscin District the Reverend Mr. Beecher reports, that at the Karen Normal School the pupils are more advanced, especially in arithmetic, than they were last year. The average daily attendance throughout the year was 47 pupils. In consequence of sickness the attendance of pupils was less than during last year. This School is well deserving of a grant-in-aid.

60. In the Karen Village Schools of this District the number of pupils was about 600.

61. The Burmah Female School Society maintained a School during the year at Rangoon. It contained 20 pupils, who have been instructed chiefly through the Vernacular in elementary knowledge. The progress of the scholars has been satisfactory.

62. The following information has been received regarding the Schools supported by the Catholic Mission in Pegu from the Right Reverend Bishop Bigandet.

In Rangoon there is a Boys' School, having 100 pupils. They are taught English, and also to read and write Burmese. There is also a Girls' School, with 30 pupils. There are likewise various Village Schools in the interior, chiefly among the Karens, where 170 pupils are taught.

SECTION VIII.—PUBLIC WORKS.

63. The amount allotted for the Public Works of Pegu, during 1860-61, was ten and a quarter lakhs of Rupees: that sum has not been exceeded. Iron roofing to the value of about 17,000 Rupees has also been received and used during the year.

MILITARY.

64. At Toungoo considerable progress has been made with the redoubt under construction at that Frontier Station, as much indeed as was possible with the funds at disposal, though scarcely so much as the importance of the work required. The earth-work of the redoubts at Thayet-myo and Bassein has been repaired.

65. * At Thayet-myo temporary buildings have been erected in lieu of Artillery barracks destroyed by fire, as noted in last year's Report. At Toungoo the ventilation of the European Infantry barracks has been improved. At Rangoon buildings formerly used for detail hospital and medical store depôt have been fitted up as barracks for European married soldiers, while another building has been provided for the medical stores. Ball courts and solitary cells have been completed. The rifle practice grounds at all the Stations have been extended and improved. •

66. At Rangoon the powder magazine mentioned last year has been completed. An iron roof has been given to the laboratory, and a shingle roof to the armoury. A new gun-shed, having an iron roof, has been completed, and another is well advanced. A store-house, constructed of brick, 450 feet long by 57 feet broad, is nearly completed, and other smaller works pertaining to the Rangoon arsenal have been completed.

The magazine in the redoubt at Toungoo has been completed.

In the redoubt at Thayet-myo both magazines are nearly completed. The ordnance godown is well advanced.

67. The commissariat depôt in the redoubt at Thayet-myo is nearly ready.

At Rangoon the commissariat buildings in the Town, including Godwin's Wharf, have received iron roofs. At Toungoo the commissariat buildings have been completed, and roofed with shingle.

CIVIL BUILDINGS.

68. A new Court House has been built at Thayet-myo, and various improvements have been made in existing Court Houses at other Stations. In Jails much has not been done, as other works were more urgent.

69. The Rangoon Custom House has been much improved. Spacious sheds have been erected in the Custom House Wharf to facilitate the landing of goods.

70. A bazaar is being erected at Bassein.

71. Good progress has been made in the buildings at the Dock Yard at Dallah. A boiler and furnace shed, 258 x 45 feet, has been completed. The marine store godown is well on to finishing, and the winch-house of the Patent Slip has been completed.

ROADS.

72. The mountain road leading from Arrakan to Prome has been kept in repair. The roads from Prome to Pongday and to Meean day have also been maintained.

The roads of the Town of Rangoon continue to be repaired with stone received from ships in the Port.

73. The Chief Engineer notices with approbation the services of the undermentioned Officers:—

Assistant to the Chief Engineer, Lieutenant S. T. Trevor.

Deputy Controller of Accounts, Captain Nepean Smith.

Executive Engineers, Lieutenant G. de P. Falconnet, at Thayet-myo; Lieutenant F. W. Pollock, at Toungoo; Captain E. Leeds, at Rangoon (Cantonment); Lieutenant J. M. Williams, Rangoon Town; Captain S. J. Batten, at Bassein.

The Commissioner desires to acknowledge the continued excellent management of the Public Works Department in Pegu, by the Chief Engineer, Captain Newmarch.

SECTION IX.—POST OFFICE.

74. No alteration has taken place in the conveyance of the mails by steamer to Stations on the Irrawaddy. The mails are conveyed to Bassein and Toungoo (*vid* Pegu) by boats.

SECTION X.—ELECTRIC TELEGRAPH.

75. The lines of Electric Telegraph for communication within the Province are the same as were entered in Section X. of the Report for before.

76. During 1860-61 a line was extended from Prome, across the Arrakan Hills, to the Island of Ramree, and thence to Akyab, brought Telegraph Wire from Rangoon to Calcutta.

To connect Rangoon with Moulmain desirable.

77. A line to connect Rangoon with Moulmain has also been projected—such a Telegraph is very desirable in many respects.

SECTION XI.—MARINE.

78. During 1860 the strength of the Irrawaddy Flotilla consisted of five steamers and four troop boats. The Commissioners in their Report upon British Burmah recommend a considerable reduction, which has been carried into effect. The Steamers *Nerbudda* and *Diana*, together with the Troop Boat *Bhaugiruttee*, have been laid up. The Steamer *Mahanuddy* has been paid off; but in order that she should be in readiness for any emergency, a small establishment has been retained on board to keep her in efficient order. A considerable saving has also been effected in the Dock Yard establishment, fewer artificers being required to keep the running vessels in repair.

Expenses of Flotilla and Dock Yard for past year.

79. In Appendix M is shown the total expense of the Flotilla and Naval Dock Yard for the year ending 30th April 1861.

The cost of each was :-

For the Flotilla	..	...	...	...	...	1,86,215
Dock Yard	.	...	...	...	...	2,46,599
						<hr/>
Total, Rupees						4,32,814

The receipts for private freight and passengers amounted to ... 47,282
And the *pro forma* charge for Government Freight ... 1,38,239

Total, Rupees ... 1,85,521

The earnings of the *Shan* are thus shown to have more nearly covered the expenditure in 1880 than in any previous year. The increase in receipts is chiefly owing to the charge for freight having been raised, so as to approximate to the charge made by boats of the country, as noted in para. 116 of last year's Report.

50. Of the whole amount shown above, as expended in the Dock Yard during the Expenditure of Dock Yard year, not more than one-third was on account of the Province of Pegu. The expenditure for material and labor may be arranged under three general heads, as showing the objects for which it was incurred:—

1. On account of private parties	...	...	...	62,203
2. "On account of Province of Pegu	...	...	...	83,274
3. On account of Government service unconnected with Pegu	...	...	...	1,08,862
Total, Rupees				2,54,339

Of the expenditure on private account the sum of 27,279 Rupees is for building and fitting out the Steamer *Emerald Palace* for the King of Burmah. Both this amount and the rest on account of work done for other private parties have been recovered and paid into the Treasury.

The actual cash received on account of the Dock Yard was 29,781 Rupees from private parties, (exclusive of the amount received from the King of Ava, which was paid after the accounts of the year had been closed,) and 3,863 Rupees received from Government Departments.

The following are the items included in heading No. 3 of this paragraph. They form no portion of the Marine expenditure of the Province. The funds necessary for executing the work have been supplied at Rangoon. The expenditure is therefore here noted as showing the transactions of the Dock Yard and the employment of the establishment; but the expenditure not being on account of the Province, is excluded from the body of the Statement M of the Appendix:—

Algauda Reef Light House	...	...	...	58,148
Bengal Marine	...	...	...	43,530
Tenasserim Province	...	...	...	5,912
Fort St. George	...	...	...	172
Total, Rupees				1,08,762

* A portion of this sum is entered in Statement M as Port Contingencies for stores supplied, &c.

Port Fund receipts and disbursements.

81. The receipts and disbursements of the Port Funds at the two sea-ports were as follows:—

							Receipts.	Disbursements.
Rangoon	...	...	...	...	...	...	37,728	47,980
Bassein	...	...	...	...	...	...	4,199	12,128
Total, Rupees							41,927	60,108

The increase in receipts over last year is owing to more ships having arrived during the last cold season. There is still, however, a heavy debt against the Port Funds.

The port dues claimable on Government sea-going vessels and not collected, amounted to 8,531 Rupees.

Vessels entered and cleared out.

82. The following table exhibits the number and the tonnage of vessels which arrived and departed during the year:—

		ARRIVALS.		DEPARTURES.	
		No. of Vessels.	Tons.	No. of Vessels.	Tons.
Rangoon	Private Vessels.....	360	109,688½	359	104,649
	Government ditto.....	35	21,311	35	21,967
Bassein	Private ditto.....	45	18,069½	61	16,615½
	Government ditto....	9	2,119	9	2,119
Total.....		449	151,218	464	145,350½

In this return the total tonnage is entered, but all vessels noted as "Private" do not pay port dues, small coasting traders are exempt, vessels returning to port within sixty days are exempted paying dues on obtaining a second port clearance, also vessels that are driven into port from stress of weather, or having sustained damage, are, in certain cases, exempt.

Straits Light dues.

83. The receipts on account of the Straits light dues was 89 Rupees.

During the year the sum of 4,267 Rupees was levied on account of wharfage from vessels unloading at the main wharf at Rangoon. The Patent Slip also produced 2,710 Rupees.

SECTION XII.—FINANCIAL.

84. In this Section is shown the total Civil expenditure of the Province during 1860-61. The result is favorable when compared with that of the previous year. The regular revenue increased in round numbers five lakhs, or £50,000, while the expenditure, allowing a lakh for the Post Office and Electric Telegraph, (the returns of which Departments have not been received,) has been reduced upwards of half-a-lakh, and it is expected will, in 1861-62, be reduced much further. The cost of Municipal Police has now been transferred from the regular disbursements, and is exhibited in a separate memorandum at foot of the statement. After deducting the disbursements for Municipal Police therefrom, the expenditure for the two last years may be thus classified :—

	1859-60.	1860-61.
	Rupees.	Rupees.
Judicial	11,28,113	10,21,916
Revenue	3,51,131	3,42,787
Customs	94,352	94,178
Marine... ..	3,69,348	3,05,293
Military	1,39,041	1,27,263
General	3,99,407	*3,83,049
Total... ..	24,81,392	22,74,486

85. The expenditure in the Marine Department has been considerably reduced, and the reductions in the Flotilla, as noticed in Section XI, "Marine," will show a much greater saving of expenditure next year. The expenditure in the Forest Department has been about one lakh over that of last year. That has been explained in Section XVII, "Forests," as arising from the expenses for much timber having been incurred, while the timber itself had not reached the depôt during the year.

86. The financial results of the year may be considered as favorable; and with the reductions in expenditure completely carried out, while the increased rate of Capitation Tax will take effect in 1861-62, next year's Report will, it is hoped, exhibit a still greater amount of surplus revenue.

* Exclusive of Postal and Electric Telegraph expenses.

SECTION XIII.—POLITICAL.

Kingdom of Burmah. 87. Friendly relations have been maintained with the King of Burmah.

88. The Eastern Frontier, where the Karen-nee States lie, has been generally quiet, though there have been reports of disturbances by Karen-nee Country. the quondan embryo King mentioned in former Reports.

89. In February 1861, an entire Shan Tribe, from the petty State called Tsaga, on the north-east quarter of the Toungoo District, being A Shan Tribe takes refuge in the British Territory. attacked by a Burmese force, fled into the British Territory. They were led by their Chief, who had offended the Burmese Government, and feared for his life. The greater portion of the tribe have had lands allotted them in the District of Toungoo, and a portion have settled at Shwegyeen. About 8,000 of them entered the British Territory.

90. Affairs in the Province of Yunân appear to be still disturbed. Little or no communication now takes place between the Burmese Capital and that country. Yunau.

91. During the year a regular coinage has, for the first time, been issued as a currency by the Burmese Government. The coin is of silver, weighing about 252 grains troy. It has on the obverse a peacock, the device of the Royal Family of Burmah; and on the reverse, the date of the present King's accession to the throne. It does not appear that a sufficient number of these coins has been issued for the entire currency of the kingdom; but if the measure is a move towards the gradual supersession of the present wasteful system of weighing and assaying all silver that passes from hand to hand, a great economical improvement will have been commenced.

SECTION XIV.—MILITARY.

92. During the year 1860-61 a considerable reduction has been made in the strength of the Native Infantry Force and of the Artillery Reduction in the numbers of Troops composing the Division. hitherto maintained in the Province. These reductions were still in progress on the 30th of April.

93. The Irrawaddy Flotilla also has been materially reduced, as has already been noticed in Section XI. of this Report, under the head of "Marine." Reduction of Flotilla.

Pegu Light Infantry broken up.

94. An organized Constabulary having been established in the Province, it was resolved to break up the Pegu Light Infantry.

95. This Corps was raised in 1852-53 by Lieutenant-Colonel Nuthall, of the Bengal Army. It was composed principally of natives of Pegu, with a few Malays. The men, whenever employed in the field, have shown themselves to be well suited for rapid movement, without the incumbrance of a baggage train, through hills and forests. Colonel Nuthall's management of the Regiment has been that of a skilful and judicious Officer.

96. The Officers of the Pegu Light Infantry have, for the most part, been appointed to the Police. Many of the men also took service in that force. The remainder are being gradually disbanded. On the 30th April there were 328 privates still retained, and since then the number has been reduced to 188.

97. The troops will henceforth be massed at the three principal positions, Rangoon, Thayet-myo, and Toungoo, having out no detachments, and will preserve their communications without any intermediate posts.

SECTION XV.—POPULATION.

98. The following is the return of the whole population for the two last years :—

RACES.						1859.	1860.
						Number of Souls.	Number of Souls.
Burmese	...	...	...	...	...	646,852	700,888
Karens	...	...	...	...	...	152,234	171,821
Talaings	...	...	...	...	...	92,854	104,499
Shans	...	...	...	...	...	16,080	17,123
Khyengs	...	...	...	...	...	10,158	13,548
Yabaings	...	...	...	...	...	6,000	8,111
Indians	...	...	...	...	...	11,000	13,818
Chinese	...	...	...	...	...	2,917	2,058
Europeans and their descendants	...	...	...	...	...	1,108	1,429
Jews	...	...	...	...	...	134	80
Other races	...	...	...	...	...	9,391	7,935
Total	...	...	...	...	...	948,731	1,041,340

99. This shows a considerable increase. It is partly due, no doubt, to more complete returns than heretofore, but mainly to a great immigration from the Burmese Territory. These returns do not include the population within the cantonments at Military Stations.

Number of Males and Females shown separately.

100. The number of adults and of youths and infants of both sexes was as follows:—

Men	...	...	...	...	...	335,017
Women	...	...	...	...	...	316,419
Boys under 15 years of age	...	...	...	...	...	205,597
Girls under 15 years of age	...	...	...	...	...	184,307
						-
Total	...	...	...	...	...	1,041,340
						-

101. During the year a careful census was taken of the population of the Town and Suburbs of Rangoon. Too many days were occupied in making the census to render it acceptable as being absolutely correct. Still, as it was chiefly taken under the personal observation of European Officers, it is probably as correct as any such return can be made in a tropical country. The permanent population of Rangoon and the suburbs of all races was shown to be—

Men	...	...	...	...	...	19,850
Women	...	...	...	...	...	16,263
Boys under 15 years	...	...	...	...	...	10,097
Girls under 15 years	...	...	...	...	...	9,674
						-
Total	...	...	...	...	...	55,884*

These are included in the general return entered in para. 98.

The floating population of Rangoon is not included in the above return.

SECTION XVI.—AGRICULTURE.

102. Cotton is produced in Pegu to some extent, but the native variety of the fibre is, in its present state, unfit for the English market. Dr. Brandis has continued his experiments with foreign varieties. At Rangoon all the seed failed, except the Taxan, which yielded good cotton. In the Tharawaddy District, near Myodwen, about 4 acres were cultivated.

* The excess shown in Major Sparks's return, para. 7, includes adult floating population.

Of three varieties of seed sown, the Sea Island yielded a few plants. Upland failed. The soil, which was a stiff clay, appeared unsuitable. Some New Orleans seed, sown at another spot, in light sandy soil, yielded a fine crop, equivalent to 125 lbs. the acre.

103. The only agricultural product which the Burmese peasants have accepted as a welcome improvement on their own stock, is a variety of paddy from the Island of Pelooguen. New Granada paddy has been condemned by them as unsuitable, and as requiring too much care. Cuba and Java tobacco they do not like so well as their own. Foreign cotton seed they will not accept. It is, they say, too uncertain in its results. To a mere peasant cultivator, such an objection is all-powerful.

104. The bulls from Nellore and Mysore, which were introduced some years ago, in the hope that the native cattle might, through them, be improved, have had no effect on the breed generally. The Burmese could, with difficulty, be induced to bring in their cows to them.

105. It is much to be regretted that the sheep-breeding establishment at Thayet-myo has entirely failed. Every possible care was taken of the animals, but since 1858 they have not thriven, and the numbers have gradually diminished by deaths. The establishment has been broken up.

106. During the dry season of 1860-61, a large embankment in the Henzada District, which had been destroyed during the rains of 1860, by an unusually high rise of the River Irrawaddy, has been restored. This work is intended to protect the fields from inundation, and about 10,000 acres of good land are cultivable only by means of it. Convict labor was principally employed in the work, but materially aided by the voluntary labor of the peasants of the neighborhood. The embankment commences at the southern end of the Town of Henzada, and runs southward. It is about 1,300 yards long, 7½ feet in average height, 25 feet broad at the base, and 8 at the top. The work has been constructed under the orders of the Officiating Deputy Commissioner, Mr. T. J. Fallon, who is entitled to great credit for having accomplished it. The embankment protects about 10,000 acres of good land from inundation.

107. In the Promo District several works for the extension of agriculture have been planned under the directions of the Deputy Commissioner, Major Brown, and executed by the voluntary labor of the cultivators. They are as follows:—

A swamp to the eastward of the ancient city of Yathe'myo, a portion of which was connected with the old moat that formed the eastern defence of the city, has been drained, and about 800 acres of land recovered.

In the township of Mengala some former dams across streamlets in the upper part of their courses had become worn away. The dams have been renewed, and the

water is thus stored up for irrigation. The surplus water now retained formerly filled a marsh some miles lower down the stream, and so rendered the land unfit for cultivation. About 1,000 acres of land have thus been recovered.

108. Useful and ornamental trees have been planted along the roads of the Town
Trees planted by roadside, and Cantonment of Rangoon by the Executive Engineer and
Rangoon. the Cantonment Magistrate, Captain Ford.

SECTION XVII.—FORESTS.

109. During the two last years large tracts of forest have been examined, Work done during the year estimates have been formed from ascertained data of the
to facilitate forest operations number of Teak trees of all sizes which they contain, the practicability of conveying away timber from each forest has been ascertained, rocks which obstructed several branches of the Beeling stream in the Tharawaddy forests have been blasted. The Thouzay stream, in the southern forests, has been cleared in the same manner. Dr. Brandis reports that about one-half of the trees in the Tharawaddy Forests cannot be floated away in consequence of natural obstruction, either of rock or silt blocking up the streams. It is evidently therefore of primary importance to remove such obstructions wherever they exist. For this cause a canal has been dug to form a channel for the waters of the Shivelay stream, in the southern part of the Prome District. On that stream and its tributaries there are 140,000 first-class Teak trees. Many other streams still require to be opened out, to render the timber grown in the country they drain available for the market.

110. The number of trees of Class I., that is, trees having a girth of 6 feet
Number of Teak trees of Class I. and upwards, which may be girdled in each separate forest
Number to be girdled yearly division, has been fixed after careful survey, with reference to the state of the growth of the trees therein, that is, of the numbers of trees of Class II. and of the smaller classes there may be to attain to the superior class. The standard size of trees to be girdled has now also been fixed in those divisions, where the general girth of trees of the first class justifies the standard at $8\frac{1}{2}$ feet in girth instead of 7 feet, as before. The total number of first-class teak trees in all the forests of Pegu is estimated at a million and a half—of these Dr. Brandis considers that 30,000 may be girdled annually.

111. The number of logs actually brought down from the forest during the past
Number of logs brought down, year was 13,947. But in addition to these, 3,400 logs,
and number sold, number in store which have been paid for, have been dragged to the water's edge, and only requires to be floated down when the water rises. The principal expense, therefore, has already been incurred and charged for

them. The number of logs actually sold during the year, of those brought down by the Department, has been 8,834 against 15,416 last year. But the logs of 1860-61 were superior in size to those of the previous year. The average rate realized by sale on each log was 25 Rupees against 15 Rupees during the previous year. About 4,200 logs remained in store at the depôts on 30th April 1861.

112. Those persons who, it was stated last year, had received permits to bring away timber from the forests, brought in 1,179 logs. The remainder of the number entered above was brought down by contractors and the Forest Department.

Useful timber of various kinds brought down.

113. Besides teak, various other trees, which yield valuable timber, have been girdled and brought down to the depôt at Rangoon.

114. The total of revenue derived from the forests during the year, by sale of timber, permit fees, and other sources, was 2,49,752 Rupees. The total expenditure was 2,76,753 Rupees, that includes, besides payments to timber contractors and the establishments, expenses incurred in forest improvements, in establishing a station at Myodwen, in the Tharawaddy Forests, and in the purchase of forty elephants, besides other contingencies.

115. Although the amount of cash realized on the year's transactions is less than the expenditure, yet the value of the stock on hand, and the improvements by which future operations are facilitated, render the year's transactions profitable. The value of timber on hand in the forests and at the depôt, and the value of timber sold, but of which the price had not been realized on 30th April 1861, amounted altogether to 1,08,000 Rupees.

116. In the last month of the year 1860, arrangements were made for granting permits to work some of the forests on the Sittang River, for a period of three years. The plan adopted was to allow permit holders to fell all trees girdled by the Forest Department before 1860, and to require payment for the same, when the logs were brought to the appointed depôt. The prices fixed were 10 Rupees on all logs more than 4½ feet in middle girth, and 5 Rupees on all logs less than that size. Each forest was to be tendered for separately, the tenderer stating what amount he offered as permit fee. This plan having been so lately brought into operation, no opinion can yet be expressed as to its success or otherwise.

117. Since the close of the year arrangements have been made for opening out additional forest tracts to permit holders. Should the working of certain forests now carried on by direct departmental management not prove to be sufficiently remunerative by the close of the season of 1862, it is proposed to carry on the working of those forests also by permit holders.

118. The Superintendent of Forests, Dr. D. Brandis, has been indefatigable in his exertions during the past year. The many difficulties Services of the Superintendent, Dr. Brandis, during the year. which heretofore existed to the working of the forests have, for the most part, been overcome, and future operations, whether under the Forest Department, contractors or permit holders, will be very much more easily accomplished than heretofore. There are now in the Southern and Tharawaddy Forests ninety elephants in the hands of forest contractors, so that the difficulties experienced two years ago from the want of those animals no longer exist.

SECTION XVIII.—TOPOGRAPHICAL SURVEY.

119. During the year ending 30th April 1861, 4,000 square miles of country have been surveyed, and 177 miles of river triangulation have been completed. Work done during the year. The total area surveyed up to the above date has been 30,855 square miles. The total cost has been 3,01,056 Rupees, being about 10½ Rupees per square mile for the whole.

120. The total number of square miles entered in former Reports, as surveyed in each successive year, is considerably more than the area Explanation of apparent errors in computation of area. now shown. Lieutenant FitzRoy, the Superintendent of the Survey, explains, that this has resulted from the field-work having in former years been pushed on so rapidly as entirely to outstrip the progress of the maps. The annual estimates of the area surveyed were made roughly, and numerous gaps remained unsurveyed here and there. During the past season these gaps have been completed. They were found to contain altogether 4,000 square miles. The arrears of field-work plotting are now being brought up. Two sheets of the map on a 4 mile to the inch scale have been completed. They embrace about 10,000 square miles of the Delta of the Irrawaddy.

121. The country still remaining to be surveyed consists of about 1,100 square miles on the western sea-coast of the Bassein District, What remains to be done. and about 2,000 square miles, chiefly of hill country, in Toungoo.

122. During the past year the survey was conducted by Lieutenant FitzRoy, with one assistant for the River Survey. Officers employed on Survey. At the season when field-work cannot be carried on, the Superintendent has been industriously employed in compiling the map from the field-books of former years.

SECTION XIX.—VACCINATION.

123. Very little success has been made in Vaccination during the past year, even in localities where, during the previous year, the exertions of the Civil Surgeons had been amply rewarded.

Vaccination attended with little success.

124. The success met with in Rangoon from virus introduced from Simla was very satisfactory among European children.

Vaccination at Rangoon successful.

125. From a crust forwarded from Rangoon to Toungoo, 140 persons (chiefly Burmese and Karens) were vaccinated, of whom 73 per cent took the disease well: this is the first season it has proved successful in the Toungoo District.

First success at Toungoo.

126. Doctor Cowie at Prome vaccinated 423 individuals with Simla lymph, but in no one case did it prove successful. The failure is accounted for by there having been very little small-pox prevailing during the past year, whereas in 1859, when the disease was very prevalent at Prome, considerable success was met with.

Vaccination at Prome failed.

SECTION XX.—HOSPITALS AND DISPENSARIES.

127. There are no hospitals maintained by Government in Pegu, except those which are required for the Jails. Charitable dispensaries, to which a few in-door patients are admitted, supported partly by Government and partly by voluntary subscriptions, are maintained in the towns of Rangoon and Thayet-myo.

Two Dispensaries.

128. In the Rangoon dispensary 129 in-door and 592 out-door patients were treated during the year. The expenses of the institution were greater than the number of patients would appear to require. The expenditure where excessive will be reduced.

Rangoon Dispensary.

129. At the dispensary of Thayet-myo 47 in-door and 642 out-door patients were treated. Considering the small amount of population at Thayet-myo, this dispensary has given relief to a large number of suffering poor persons, and the expenses have been very moderate. The institution has been under the care of Doctor Clement Williams, of the 68th Light Infantry, during the year.

Thayet-myo Dispensary.

SECTION XXI.—MISCELLANEOUS.

130. In former years it has been reported that a site for a Port near the mouth of the Bassein River, at the entrance to the gulf of Martaban, City and Port of Dalhousie. had been sought for. A position near Negrais Island was selected by Naval Officers of high repute, and appeared as if marked out by nature to be the Emporium of the vast country drained by the Irrawaddy and its tributaries. A commencement was then made towards laying out a town, to which was given the revered name of Dalhousie. After several years' trial, however, it has been found that the situation is exposed to the full force of the south-west monsoon, so that ships at that season cannot safely ride, and country boats cannot live. The harbour also is liable, in a remarkable degree, to periodical cyclones, which destroy all they strike. The trade of the Upper Irrawaddy tends more and more towards Rangoon, near to which there is a more extensive area of fertile land than is to be found within the District adjoining Dalhousie. The direct branch of the Irrawaddy leading into the Bassein River becomes each year more and more silted up. All these circumstances have shown that, however desirable in many respects would be a Port at Dalhousie, yet adverse facts pronounced against it. The Custom House has now been withdrawn to Bassein, about 70 miles up the river.

131. The soldiers' garden at Rangoon has, under the excellent management of Captain F. Harris, Assistant Commissary General, Cantonment Garden, Rangoon. maintained its usefulness. The portion of the ground allotted to a kitchen garden has been cultivated by 120 European soldiers, who raised over 15,000 lbs. of vegetables. A considerable quantity, not less than 32,000 lbs., was also raised within the enclosure by the Commissariat. The portion of the land which is laid out as a pleasure ground has been well kept and extended, no easy task in a place which was once a noxious swamp, and in a climate having an annual fall of 100 inches of rain. Thus have the objects proposed by the Most Noble the Marquis of Dalhousie, in ordering the formation of this garden, been fully attained. These were:—

First.—To afford the means of raising vegetables for the European Troops.

Second.—To give the men an opportunity of amusing themselves in the healthy occupation of gardening.

Third.—To afford a place of pleasant resort for the soldiers in common with the rest of the community.

132. During the year a river steamer, which was brought from England for His Majesty the King of Burmah, was put together and River steamer for H. M. the King of Burmah launched. launched at the Government Dock Yard at Rangoon. The steamer now plies regularly between Mandalay and Rangoon.

133. It may be mentioned among the remarkable deviations of route into which traffic may be forced, that in consequence of the trade between Burmah and Yunán having been interrupted, cotton, which formerly was exported from Burmah to Yunán, and for which raw silk was received in return, is now sent down, though in small quantities, to Rangoon, for export to the Straits and Bengal, while Chinese raw silk is imported by sea.

134. A Volunteer Regiment, which has been named the Rangoon Rifles, has been formed during the year. The number enrolled amounts to 13 Officers and 175 Rank and File. The Regiment owes every thing to the zeal and good management of the Commandant, Lieutenant-Colonel Sparks, and of the Adjutant, Captain H. Nelson Davies.

135. Two Members of the Police and Finance Commissions, Mr. R. Temple, of the Bengal Civil Service, and Colonel H. Bruce, C. B., visited the Province of Pegu during the year, and embodied their views in a Report upon the affairs of the four Provinces of British Burmah. Nearly all the reductions and improvements in the administration which were recommended by them have either been, or are in course of being carried out.

136. A Geological Survey of Pegu and the adjoining Provinces was sanctioned during the year. The Survey has been commenced by Mr. W. T. Blanford, in the District of Henzada, west of the Irrawaddy. The scientific results of the Survey belong to the Geological Reports; but the observations, which possess an economic value, will be noticed here. Thirteen salt springs have been visited; they lie generally near the base of the Arrakan Hills: all of them have been worked by the people of the country. A few are still worked. One of unusual richness is pronounced to be capable of yielding 920 lbs. avoirdupois of salt daily. Petroleum exists in the township of Myanoung, but apparently not in sufficient quantity to be profitably extracted. Traces of coal were found, but no indication of a seam of any value.

137. During the year a steam mill for husking and cleaning rice, invented by Mr. Thomas Sutherland, of Melbourne, has been established at Rangoon. It is capable of turning out 250 tons of cargo rice daily. The establishment of extensive and ingenious machinery, so well adapted for extending the trade in the staple article of produce of Pegu, is an event deserving of record in a Report of facts in the progress of the Province.

138. In accordance with instructions from the Supreme Government, enquiries have been made to discover localities suited for sanitary establishments for European Troops. The Province of Pegu affords, though in a remote quarter, an elevated mountain position, and also

sea-coast locality, both of which, but especially the latter, may afford a valuable change of air for European constitutions where organic disease does not exist.

139. Dr. D. Brandis, the Superintendent of Forests, reports that to the south-
 Position in the Hills east of east of the Station of Toungoo is a tract of country con-
 Toungoo taining about 100 square miles, with an average elevation of 4,000 feet, and numerous spurs of a much greater elevation. Here, at a distance of about 50 or 60 miles of travelling distance from Toungoo, one-half of which may be accomplished by water, a site for a Station can be found at an elevation of between 7 and 8,000 feet. It is in about the latitude of 19° north. From information derived from the Karen mountaineers, it is believed that the fall of rain is much heavier in the mountains than in the plains. No roads, except mountain paths, now exist. It is doubtful whether, with reference to the great expense which would have to be incurred in establishing and maintaining a sanitarium in the position above referred to, as also with reference to the fall of rain, which, probably, would not be under 150 inches in the year, it would not be better in every respect to send those requiring a change of air from Pegu to a mountain station, to the Neilgherry Hills, in preference of a hill station in the damp atmosphere referred to

140. A sea-coast sanitarium might be found near the mouth of the Rangoon
 Sea coast Sanitarium. River, or, better still, at Amherst, at the mouth of the Salween. At the latter place there is a thriving town, a point of some importance for procuring laborers, and some articles of food. Formerly there was a sanitarium there for European Troops. It was abandoned, partly, it is believed, in consequence of the difficulty of providing occupation and amusement for the invalids and convalescents. That objection might be removed without much difficulty. It is not expected, however, that a sanitarium at Amherst would answer more than a change of air for those who had no organic disease, or for convalescents to recover their strength.

141. Dr. J. L. Ranking, of the Madras Medical Establishment, has furnished an
 Rangoon Sanitary Statistics. interesting report on Rangoon as a station for European soldiers. From the hospital statistics of three years, ending with March 1860, it is shown that the average admissions per 1,000 of strength of Europeans (Artillery and Foot) at the Station into hospital, was 10·20. The average of deaths per 1,000 of strength was 16·20. Dr. Ranking remarks upon these figures:—

“ These tables exhibit the climate of Rangoon in a most favorable light, not only
 “ as compared with Stations in India, but even when viewed in relation to the mor-
 “ tuary rates pertaining to British Troops in any quarter of the globe. With such a
 “ low death rate as has pertained to this Station for the last three years, it becomes a
 “ question whether any locality within the Province will be found so deserving of the
 “ name of Sanitarium as does the Station of Rangoon.”

CONCLUSION.

Services of Officers acknowledged.

142. The services of the following Officers, during the year, are thankfully acknowledged :—

DEPUTY COMMISSIONERS.

Lieut.-Colonel A. Fytche.	Captain M. B. S. Lloyd.
Captain R. D. Ardagh.	Captain C. P. Hildebrand.
Major T. P. Sparks.	T. J. Fallon, Esq., Officiating.
Major D. Brown.	Captain Horace Browne, Officiating.
Captain E. J. Spilsbury.	

CANTONMENT JOINT MAGISTRATE.

Captain B. Ford.

SETTLEMENT OFFICER.

Captain A. R. McMahon, Officiating.

PERSONAL ASSISTANT TO COMMISSIONER.

Captain H. Nelson Davies.

ASSISTANT COMMISSIONERS.

Captain G. W. Sanders.	P. B. Doyle, Esq.
Lieutenant A. G. Duff.	D. F. Lonsdale, Esq.
Lieutenant C. W. Street.	Lieutenant W. C. Plant.

EXTRA ASSISTANTS.

H. W. Lewis, Esq.	J. Treacy, Esq.
C. Phillips, Esq.	Moung Khaing.

COMMANDANT, PEGU LIGHT INFANTRY.

Lieut.-Colonel W. F. Nuthall.

SUPERINTENDENT OF FORESTS.

Dr. D. Brandis.

SUPERINTENDENT, IRRAWADDY FLOTILLA.

Captain A. Brooking.

MASTER ATTENDANTS.

Captain H. Lewis.	Lieutenant T. W. Aylesbury, I. N.
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COLLECTORS OF CUSTOMS.

R. S. Edwards, Esq.	G. E. Barr, Esq.
W. DeCourcy Ireland, Esq.	

MEDICAL OFFICERS.

Dr. J. Cowie.	Dr. J. Davis.
Dr. C. Stewart.	

LIST of Documents used in drawing up the Report on the Province of Pegu for the year 1860-61.

SECTION.	Subject of Documents.	Author.	No. and Date.
II.—JUDICIAL, CIVIL JUSTICE.	Civil Statements and Reports thereon for the year 1860, from the Districts of—		
	Rangoon ...	Judicial Deputy Commissioner	No. 12, dated 30th Jan. 1861.
	Bassein ...		No. , dated 22nd Jan. 1861.
	Prome ...		No. 17, dated 1st Feb. 1861.
	Henzadah ...	Deputy Commissioners ...	No. 12, dated 7th Jan. 1861.
	Tharawaddy ...		No. , dated 1st Jan. 1861.
	Toungoo ...		No. , dated 17th Feb. 1861.
III.—JUDICIAL, CRIMINAL JUSTICE.	Annual Criminal Returns and Reports for the year 1860, from the Districts of—		
	Rangoon ...	Deputy Commissioner ...	No. 1829, dated 25th June 1861.
	" Town ...	Magistrate ...	No. , dated 25th Feb. 1861.
	" Cantonment ...	Ditto ...	No. 1, dated 29th Jan. 1861.
	Bassein ...		No. , dated 6th Mar. 1861.
	Prome ...		No. 23, dated 7th Feb. 1861.
	Henzadah ...	Deputy Commissioners ...	No. 8, dated 5th Jan. 1861.
	Tharawaddy ...		No. , dated 1st Feb. 1861.
	Toungoo ...		No. , dated 22nd Jan. 1861.
IV.—JUDICIAL, POLICE.	Rangoon District ...	Deputy Commissioner ...	No. 405, dated 21st Feb. 1861.
	" Town ...	Magistrate ...	No. 1798, dated 22nd June 1861.
	" Cantonment ...	Ditto ...	No. , dated 25th Jan. 1861.
	Bassein ...		No. , dated 1st May 1861.
	Prome ...		No. 53, dated 27th Mar. 1861.
	Henzadah ...	Deputy Commissioners ...	No. , dated 7th Feb. 1861.
	Tharawaddy ...		No. 19, dated 7th Jan. 1861.
			No. , dated 15th Feb. 1861.
	Toungoo ...	Ditto ...	No. 9, dated 6th Feb. 1861.
V.—JAILS.	Half-yearly Reports and Jail Returns, from the Districts of—		
	Rangoon ...	Magistrate ...	No. , dated 30th June 1860.
			No. , dated 25th Jan. 1861.
			No. 479, dated 20th Mar. 1861.
	"	Doctor Dickinson ...	No. , dated Jan. 1861.
			No. , dated 11th Mar. 1861.
			No. , dated 5th July 1860.
	Bassein ...	Deputy Commissioner ...	No. , dated 31st Dec. 1860.
			No. 32, dated 21st Jan. 1861.
			No. , dated 16th July 1860.
	Prome ...	Deputy Commissioner ...	No. , dated 12th Jan. 1861.
	"		No. , dated 1st Feb. 1861.
	"	Doctor Cowie ...	No. , dated May 1861.
			No. , dated 30th June 1860.
	Henzadah ...	Deputy Commissioner ...	No. , dated 31st Dec. 1860.
			No. 16A, dated 11th Jan. 1861.
	"	Doctor Griesbach ...	No. , dated Jan. 1861.
			No. , dated 30th June 1861.
	Tharawaddy ...	Deputy Commissioner ...	No. , dated 31st Dec. 1861.
			No. , dated 26th Jan. 1861.
			No. , dated 30th June 1860.
	Toungoo ...	Deputy Commissioner ...	No. , dated 31st Dec. 1860.
			No. , dated 22nd Jan. 1861.

LIST of Documents used in drawing up the Report on the Province of Pegu for the year 1860-61.—(Continued.)

Secret	Subject of Documents.	Author.	No. and Date.
VI.—REVENUE.	Revenue Reports and Demand Statements, from the Districts of—		
	Rangoon ...	Deputy Commissioners ...	No. ... dated 4th May 1861.
	Bassein ...		No. 1349, dated 9th May 1861.
	Prome ...		No. 31, dated 10th May 1861.
	Henzadah ...		No. 1790, dated 22nd June 1861.
	Tharawaddy ...		No. 1880, dated 28th June 1861.
	Toungoo ...		No. 1746-90, dated 14th June 1861.
	Rangoon ...	Revenue Settlement Officer	No. 121, dated 14th May 1861.
			No. ... dated 10th May 1861.
			No. ... dated 15th June 1861.
			No. ... dated 1st May 1861.
			No. 1, dated 1st May 1861.
VII.—EDUCATION.	Customs Returns and Reports, from—		
	Rangoon ...	*	No. 23, dated 17th May 1861.
	Bassein ...		No. 2, dated 8th May 1861.
	Maday ...		No. 19, dated 10th May 1861.
	Toungoo ...		No. ... dated 1st May 1861.
			No. 1, dated 4th May 1861.
	Report on Rangoon Government School ...	Major Sparks, President of Committee of Instruction	No. ... dated 30th Sept. 1860.
	Amount of Fees received Report on the Karen Normal Schools at Rangoon ...	Reverend Mr. Rose ...	No. 105, dated 5th June 1861.
	Schools for Pwé Karens...	Mrs. Vinton ...	No. ... dated
	Burmah Female School at Rangoon ...	Reverend Doctor Brayton...	No. ... dated 30th Sept. 1860.
	Report on the Henzadah Normal School ...	Mrs. Brandis, Secretary to the Committee ...	No. ... dated 1st Mar. 1861.
III.—DEPARTMENT OF PUBLIC WORKS.	Report on the Karen Normal School at Bassein...	Reverend B. C. Thomas ...	No. ... dated 2nd Nov. 1860.
	Education among the Karens at Toungoo ...	Reverend J. L. Beacher ...	No. ... dated 10th Dec. 1860.
	Schools supported by the Catholic Mission ...	Doctor Mason ...	No. ... dated 15th April 1861.
		Reverend Doctor Bigandet, Bishop of Ava and Pegu..	No. ... dated 21st May 1861.
	Report on the Progress of Department Public Works in Pegu for 1860-61 ...	Captain C. D. Newmarch, Chief Engineer, Pegu, Tenasserim, and Martaban Provinces ...	No. ... dated 6th June 1861.

LIST of Documents used in drawing up the Report on the Province of Pegu for the year 1860-61,—(Continued.)

SECTION.	Subject of Documents.	Author.	No. and Date.
IX.—Post Office.	No reports received ...	H. N. P. Grant, Esq. ...	No. 166, dated 11th July 1861.
X.—ELECTRIC TELEGRAPH.	Telegraph communication between Rangoon and Moulmain ...	{ Secretary to Government, Home Department ... Commissioner of Pegu ... Secretary to Government, Home Department ... Commissioner of Pegu ...	No. 97, dated 14th Jan. 1861. No. 13, dated 11th May 1861. No. 1193, dated 15th June 1861. No. 21, dated 29th June 1861.
XI.—MARINE.	Receipts and Disbursements of the Irrawaddy Flotilla ... Receipts and Disbursements of the Naval Dock Yard ... Receipts and Disbursements of the Rangoon Port Fund ... Receipts and Disbursements of the Bassein Port Fund ... Earnings of the Irrawaddy Flotilla ... Statement showing the expenses of the Dock Yard ... Disbursement Statements, from the Districts of—	Captain H. Lewis, Officiating Superintendent, Irrawaddy Flotilla ... Captain Brooking, Superintendent, Irrawaddy Flotilla ...	No. 948, dated 1st June 1861. No. 982, dated 5th June 1861. No. 1611, dated 8th June 1861. No. 1148, dated 6th July 1861.
XII.—FINANCIAL.	Rangoon ... " Town ... " Cantonment ... Bassein District ... Prome ... Henzadah ... Tharawaddy ... Toungoo ... Revenue Settlement Officers ...	Deputy Commissioner ... Magistrate ... Ditto ... Deputy Commissioners Lieutenant McMahon ...	No. 120, dated 28th June 1861. No. ... dated 7th June 1861. No. 355, dated 10th June 1861. No. 128, dated 11th June 1861. No. ... dated 15th June 1861. No. ... dated 1st June 1861. No. ... dated 19th June 1861. No. ... dated 24th May 1861. No. 8, dated 27th June 1861. No. ... dated 11th June 1861.
XIII.—POLITICAL.	A Shan tribe takes refuge in the British Territory ...	Commissioner of Pegu ...	No. 41-7, dated 22nd Feb. 1861. From Commissioner of Pegu to Secretary to Government, Foreign Department.
XIV.—MILITARY.	Annual Report of the Pegu Light Infantry Battalion ...	Lieutenant Colonel W. F. Nuthall, Commandant, Pegu Light Infantry ...	No. 95, dated 29th June 1861.

LIST of Documents used in drawing up the Report on the Province of Pegu for the year 1860-61.—(Concluded.)

SECTION.	Subject of Documents.	Author.	No. and Date.
XV.—POPULATION.	Population Returns for the year 1860, from the Districts of—		
	Rangoon ...	Deputy Commissioners of Districts ...	No. 142, dated 15th Jan. 1861.
	Basscin ...		No. ... dated 28th Feb. 1861.
	Prome ...		No. 124, dated 19th Jan. 1861.
	Henzadah ...		No. 126, dated 8th Jan. 1861.
	Tharawaddy ...		No. ... dated 1st Jan. 1861.
	Toungoo ...		No. 60, dated 25th Jan. 1861.
XVI.—AGRICULTURAL.	Report on Cotton Cultivation ...	Doctor D. Brandis, Superintendent of Forests ...	No. 222, dated 13th May 1861.
	Report on Sheep Farm at Thayet-myo ...	Captain Harris, Assistant Commissary General ...	No. 1875, dated 11th April 1861.
	Embankment at Henzadah ...	Deputy Commissioner, Henzadah ...	No. 109, dated 6th Dec. 1860.
XVII.—FORESTS.	Receipts and Disbursements for 1860-61 ...	Doctor D. Brandis, Superintendent of Forests in Pegu ...	No. ... dated 7th June 1861.
	Report on the Forests ...		No. 331, dated 13th June 1861.
			No. 40, dated 27th Jan. 1861.
XVIII.—TOPOGRAPHICAL SURVEY.	Progress Report of the Survey ...	Lieutenant FitzRoy, Superintendent, Topographical Survey ...	No. 16, dated 21st June 1861.
XIX.—VACCINATION.	Annual Report on Vaccination in Pegu ...	Doctor Graham, Deputy Inspector General of Hospitals in Pegu ...	No. 46, dated 1st July 1861.
	Ditto at Basscin ...	Doctor Davis, Civil Surgeon	No. 38, dated 26th Jan. 1861.
	Ditto at Prome ...	Doctor Cowie, Civil Surgeon	No. 29, dated 18th June 1861.
	Ditto at Thayet-myo ...	Doctor Williams, Civil Surgeon ...	No. ... dated 1st Feb. 1861.
	Ditto at Henzadah ...	Doctor Griesbach, Civil Surgeon ...	No. ... dated 26th Jan. 1861.
	Ditto at Myan-Oung ...	Doctor Stewart, Civil Surgeon ...	No. ... dated 22nd June 1861.
	Ditto at Mengyee ...	Mr. Yarde, in Civil Charge	No. ... dated 1st Feb. 1861.
	Ditto at Toungoo ...	Doctor Gordon, Civil Surgeon ...	No. ... dated 6th Feb. 1861.
XX.—HOSPITAL, DISPENSARY.	Report on the Rangoon Charitable Dispensary ...	Doctor Dickinson, Civil Surgeon ...	No. ... dated 9th July 1861.*
	Report on the Charitable Dispensary at Thayet-myo ...	Doctor C. Williams, Officiating Civil Surgeon, Thayet-myo ...	No. ... dated 1st May 1861.
XXI.—MILITARY LABOUR.	Soldiers' Garden in Rangoon Cantonment ...	Captain F. Harris, Assistant Commissary General ...	No. 279, dated 8th July 1861.
	Regiment of Volunteers embodied ...	Commissioner of Pegu ...	No. 32, dated 14th Nov. 1860.
			No. 33, dated 17th Nov. 1860.
	Sanatoria in Pegu ...	Doctor Brandis ... Doctor Ranking, Surgeon-Major of Artillery ...	No. ... dated 4th June 1860. No. 64, dated 29th Feb. 1861.

APPENDICES
TO THE
REPORT
ON THE
ADMINISTRATION OF THE PROVINCE OF PEGU.
FOR 1860-61.

A.

STATEMENT of Area, Population, and Revenue of Pegu for the year 1860-61, omitting Fractions.

Districts.	Area in Square Miles.	Population— Number of Souls.	Number of Town- ships.	Land Revenue.	Capitation Tax.	Customs.	Fisheries.	Alms and Includ- ing (Pium).	Miscellaneous Taxes and Re- ceipts.	GRAND TOTAL.
				Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.	Rupees.
Rangoon	9,800	2,52,607	14	5,39,186	2,34,028	5,89,141	2,16,435	1,91,470	6,08,672	23,76,881
Bassein	8,900	2,41,070	15	2,56,211	2,21,982	68,783	1,23,051	61,038	69,714	8,02,779
Prome	5,500	2,34,128	17	2,60,576	2,28,840	5,65,696	8,415	19,350	65,735	11,48,612
Henzalah	2,200	1,18,614	7	1,62,168	1,45,880	.....	41,213	29,150	31,968	4,10,374
Tharrawaddy	1,950	1,28,248	7	1,01,558	98,578	.....	1,328	3,240	12,910	2,28,614
Toungoo	3,900	66,778	4	34,701	45,941	13,275	7,519	56,568	26,720	1,84,724
Total	32,250	10,41,340	66	13,54,894	9,75,249	12,86,895	4,10,861	3,60,816	8,13,719	51,52,034

The following Local taxes are not included in the above —

	Rupees.
Municipal Fund	...
Bazar Fund	94,729
Ferries	47,610
Sale of Land	3,332
Rent on Town Lots	5,623
Total Rupees	63,328
Total Rupees	214,817

B.

STATEMENT of Appeals and Original Suits, Regular and Miscellaneous, instituted, disposed of, and pending before all the Authorities, European and Native, in the Province of Pegu in the year 1860.

Districts.	NUMBER OF CASES PENDING AT THE CLOSE OF 1859.				NUMBER OF CASES INSTITUTED DURING 1860.				NUMBER OF CASES DISPOSED OF.				NUMBER OF CASES PENDING AT THE CLOSE OF 1860.			
	Appeals.	Original Suits.	Miscellaneous.	Total.	Appeals.	Original Suits.	Miscellaneous.	Total.	Appeals.	Original Suits.	Miscellaneous.	Total.	Appeals.	Original Suits.	Miscellaneous.	Total.
Rangoon	10	161	61	232	113	4351	1021	5485	115	4435	1014	5564	8	77	68	153
Bassien	115	91	8	214	143	5660	592	6395	238	5669	591	6498	20	82	9	111
Prome	119	116	17	252	179	4328	915	5422	285	4997	980	5612	13	47	2	62
Henzada	*75	95	2	172	171	4154	157	4482	237	4246	159	4642	9	8	0	12
Tharawaddy	2	3	1	6	25	1515	80	1620	26	1516	81	1623	1	2	0	3
Toungoo	10	21	...	31	109	1357	361	1827	116	1345	361	1822	2	33	1	36
Total	331	6	89	907	740	21365	3126	25231	1017	21608	3136	25761	53	244	80	377

* The excess as here shown over the number entered in last year's Report consists of cases transferred.

C.

STATEMENT showing the Races of the Litigants in the several Courts of the District of Rangoon, during the year 1860.

Cocara.	NUMBER OF SUITS INSTITUTED BETWEEN										Total Number of Suits instituted in 1860.
	Europeans only.	Europeans and Bur- mese.	Europeans and Natives of India.	Europeans and Chinese.	Burmese only.	Burmese and Natives of India.	Burmese and Chinese.	Natives of India only.	Natives of India and Chinese.	Chinese only.	
District	167	75	164	5	10	9	.....	45	.....	1	476
Assistant Commissioner...	.....	1	1	.....	24	.....	1	3	.....	.....	30
Extra Assistant Commissioner	.....	.....	.....	.....	28	.....	.....	.....	.....	.....	28
Taxtday	.....	.....	.....	.....	455	172	20	732	4	5	1,388
Myeokes	.....	.....	.....	.....	2332	46	33	18	.....	.....	2,429
Total	167	76	165	5	2849	227	54	798	4	6	4,351

Under the head of "Europeans" are included Eurasians and Armenians. Under "Natives of India"—Bengalees, Madrassees, Surattees, Parsees, Moghuls, and Asiatic Jews. Under "Burmese"—Talangs, Karens, Shans, and other cognate tribes.

STATEMENT showing the Races of the Litigants in the several Courts of the District of Henzadah during the year 1860.

Courts.	NUMBER OF SUITS INSTITUTED BETWEEN										Total number of suits instituted in 1860.
	Europeans only.	Europeans and Burmese.	Europeans and Natives of India.	Europeans and Chinese.	Burmese only.	Burmese and Natives of India.	Burmese and Chinese.	Natives of India only.	Natives of India and Chinese.	Chinese only.	
District	...	2	1	.....	8	1	.....	3	.....	.....	15
Assistant Commissioner	...	1	.....	.....	19	3	.....	1	.....	.....	24
Treasury	590	33	16	23	.....	3	665
Myrookes	417	20	2	19	.....	.....	458
Total	...	3	1	.....	1034	57	18	46	.....	3	1162

E

RETURN showing the Working of the Civil Courts of the several Districts of the Province of Pegu during the year 1860.

District.	NUMBER OF CASES DISPOSED OF DURING THE YEAR.												AVERAGE DURATION OF SUITS DISPOSED OF DURING THE YEAR.								LONGEST PERIOD ANY CASE ON THE FILE HAS BEEN PENDING.											
	Appeals.						Original.						Miscellaneous.						Appeals.				Miscellaneous.									
	Decided on trial.		Dismissed in default.		Transferred.		Total disposed of.		Decided on trial.		Withdrawn.		Compromised.		Dismissed in default.		Transferred.		Total disposed of.		Days.		Months.		Days.		Months.		Days.		Months.	
	Decided on trial.	Withdrawn.	Compromised.	Dismissed in default.	Transferred.	Total disposed of.	Decided on trial.	Withdrawn.	Compromised.	Dismissed in default.	Transferred.	Total disposed of.	Decided on trial.	Withdrawn.	Compromised.	Dismissed in default.	Transferred.	Total disposed of.	Days.	Months.	Days.	Months.	Days.	Months.	Days.	Months.	Days.	Months.	Days.	Months.		
Bangkok	105	1	3	6	...	115	2142	366	796	1120	1	4455	783	55	97	79	...	1014	...	19	...	11	...	8	...	27	3	28	2	22		
Bassia	...	314	...	...	...	238	3075	314	1377	901	2	5669	571	...	20	...	...	591	10	17	1	4	...	19	12	...	5	3	4	...
Prome	...	205	...	15	65	...	285	3382	70	631	364	...	4397	917	...	13	...	930	...	20	...	5	...	2	8	...	10	6	...	...
Hamah	...	205	...	9	...	28	297	1929	11	1531	772	...	4246	129	30	...	...	158	2	12	...	18	...	4	10	28	10	21	1	5
Tharavaddy	...	19	...	2	5	...	26	687	...	849	...	...	1516	81	...	...	...	81	...	17	...	7	...	12	1	...	1	...	...	10
Toungoo	...	29	...	8	9	...	116	1229	...	102	14	...	1345	319	...	41	1	361	...	7	...	15	...	3	...	10	...	25	...	4		
	847	1	61	85	23	1017	12374	761	5288	3181	3	21608	2800	55	201	80	...	3136	2	15	...	15	...	4	12	...	10	21	...	4		

F.

ANNUAL RETURN of Regular Appeal and Miscellaneous Suits pending, instituted, and disposed of by the Commissioner of Pegu during the year 1860.

NATURE OF SUITS.	REMAINING ON THE 1st DECEMBER 1859.					INSTITUTED DURING THE YEAR 1860.					DISPOSED OF DURING THE YEAR 1860.					REMAINING ON THE 1st DECEMBER 1860.					REMARKS.				
	Hangoon.	Prome.	Tharwaddy.	Thongoo.	Total.	Hangoon.	Prome.	Tharwaddy.	Thongoo.	Total.	Grand Total.	Hangoon.	Prome.	Tharwaddy.	Thongoo.	Total.	Number of cases decided.	Number in favor of Applicant.	Number of cases settled by Pendent.	Number in favor of Applicant.		Hangoon.	Prome.	Tharwaddy.	Thongoo.	Total.
I. SUITS AFFECTING LANDS.																									
Mortgage	1				1						1						1								
Houses																									
Shops																									
Gardens																									
Fields																									
Dams																									
Other Cases																									
II. PERSONAL SUITS.																									
Debts	3		2		5					4	9	7					9								
Hereditary Rights																									
Marriage			2		2						2						2								
Adoption																									
Divorce																									
Illegitimate Children																									
Other Cases										1	1											1			1
III. MISCELLANEOUS SUITS.																									
Miscellaneous cases including Application for Special Appeal	2	4	1	16	23	17	5	6	11	34	70	25	8	6	27	64					1	1	4		5
Total	13	5	12	2	22	22	5	6	13	49	90	33	8	6	26	77	13			13	2	1	4		5

G.

ABSTRACT STATEMENT showing the number of persons apprehended on Criminal Charges (including those under trial at the beginning of the year) and how disposed of in each district of the Province of Pegu during 1860, also the value of property stolen and recovered.

1.	2.	3.	4.	5.	6.	7.	8.	9.												10.	11.	12.	13.	
District.	Number of persons supposed to be concerned in crimes of every description committed in 1860.	Number of person arrested and brought to trial.	Number of persons convicted.	Number of persons acquitted.	Died, escaped, or transferred.	Awaiting trial or committed to Sessions.	Proportion of convictions to arrests, omitting fractions.	DETENTION OF WITNESSES.												Amount of property stolen, omitting fractions.	Amount recovered, omitting fractions.	Proportion of amount recovered to that stolen, omitting fractions.	Remarks.	
								1 Day.	2 Days.	3 Days.	4 Days.	5 Days.	6 Days.	7 Days.	8 Days.	9 to 15 Days.	16 to 22 Days.	23 to 30 Days.	Above 30 Days.					Total.
Rangoon District	2335	2503	1523	937	32	13	60 per cent.	1683	190	78	20	32	8	3	5	2013	Rs. 21,638	Rs. 7,344	33 per Cent.					
Rangoon Town	1834	1732	928	780	16	8	33 "	735	26	33	2	..	..	..	..	816	39,165	8,267	8 "	
Rangoon Cantonment	903	893	717	104	42	..	83 "	89	16	9	..	2	..	..	..	116	2,073	634	30 "		
Bassein	5069	5083	3277	1462	1	48	90 "	2118	536	316	179	112	33	29	6	3562	23,965	7,111	30 "					
Prome	5305	4735	2858	1815	15	47	61 "	3381	658	219	25	30	11	..	..	4024	35,464	8,452	24 "			
Henzada	2666	3324	1966	1332	11	15	60 "	1234	257	122	32	11	1	..	1	169	11,412	6,618	58 "					
Tharrawaddy	1500	1282	746	446	27	33	59 "	728	129	59	31	5	5	3	18	878	10,624	2,787	25 "					
Toungoo	1440	1037	653	471	6	7	53 "	619	174	69	33	12	..	..	..	503	22,374	4,129	18 "		
Total	22292	20365	12998	7337	150	191	62 per cent.	11294	2926	201	322	234	56	37	16	10671	1,63,495	36,328	22 per Cent.					

H.

STATEMENT of the nature and number of Crimes ascertained to have been committed in the several districts of the Province of Pegu during the year 1860.

CRIMES.	RANGOON.							Total.	Grand Total.
	Deputy Com- missioner.	Magistrate.	Commissioner Joint Magistrate.	Bassein.	Prome.	Henzada.	Tharawaddy.		
FIRST CLASS.									
All crimes attended with murder or wounding with intent to murder.									
1. Murder	10	..	1	2	3	2	1	3	22
2. Gang robbery and river dacoity	2	..	..	..	9	1	..	..	12
3. Highway robbery	..	..	..	..	..	..	1	..	1
4. Burglary	..	3	..	..	..	..	..	..	3
5. Theft	..	1	..	..	..	..	..	..	1
6. Cattle-stealing	..	..	..	..	1	..	..	..	1
7. Wounding with intent to murder	2	1	..	1	..	..	1	..	5
SECOND CLASS.									
1. Culpable homicide	..	1	..	1	4	..	..	..	6
2. Gang robbery with wounding	1	..	..	2	23	9	..	1	36
3. Highway robbery with wounding	1	1	..	..	1	..	..	..	3
4. Burglary with wounding	2	..	..	..	..	..	..	..	2
5. Theft with wounding	..	1	..	3	..	1	..	..	5
6. Cattle-stealing with wounding	..	..	..	..	..	..	..	..	..
7. Assault with wounding or great injury	2	11	2	2	..	6	1	3	27
8. Arson and incendiarism	1	..	..	5	..	9	..	..	15
9. Rape	8	2	..	6	12	9	3	1	41
10. Affray or riot with violent breach of the peace	1	..	..	..	2	..	..	1	4
THIRD CLASS.									
1. Gang robbery on land	11	..	..	3	40	29	6	13	107
Do. do. on river	11	2	..	1	2	1	..	..	22
2. Highway robbery	11	11	..	..	16	..	..	..	40
3. Burglary	6	36	1	3	..	36	12	5	99
4. Theft	125	117	50	600	293	423	185	195	2018
5. Cattle-stealing	36	6	..	16	31	32	19	25	168
FOURTH CLASS.									
1. Receiving stolen property	4	12	..	4	19	10	5	2	56
2. Child-stealing for selling into slavery	..	..	..	..	..	..	..	..	..
Do. do. for other illegal purposes	1	..	..	..	2	..	..	..	8
3. Importation of slaves	..	..	..	..	..	..	..	..	..
4. Counterfeiting coin or uttering base coin	..	..	..	6	..	..	..	..	6
5. Forgery	1	..	..	1	1	1	..	..	6
6. Perjury or subornation of perjury	2	3	..	8	3	4	4	6	30
7. Adultery	1	..	..	1	18	..	6	..	26
8. Attempts to commit any of the above	11	7	..	19	9	11	7	..	61
FIFTH CLASS.									
1. Disorderly conduct	..	..	226	1	..	..	5	..	232
2. Breach of local Regulations	35	120	156	90	40	72	31	53	619
3. Nuisance public or indecent exposure of person	3	2	65	1	..	1	..	..	64
4. Neglect of duty by Police	16	83	37	108	77	37	83	9	345
5. Disobedience of orders by Government servants	77	7	13	144	274	298	8	9	825
6. Abusive language	262	56	8	604	536	194	205	21	2128
7. Petty assault	242	270	37	281	538	194	32	119	1763
8. Gambling	68	29	10	227	90	171	62	29	686
9. Fraudulently appropriating property found	2	..	..	52	5	..	..	..	59
10. Other cases	169	317	127	868	738	209	76	116	2140
Total									
Total	1140	1079	723	2528	2897	1768	748	801	11688

I.
STATEMENT showing the Principal Articles of Import and Export at the Sea and Inland Frontier Custom Houses of the Province of Pegu, for the year 1860-61, ending 30th April 1861.—Fractions of Rupees omitted.

Number.	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
	Articles Exported by Sea.	Value of Articles Ex- ported by Sea.	Articles Imported by Sea.	Value of Articles Im- ported by Sea.	Articles Exported to Land, (never included) beyond frontier.	Value of Articles Ex- ported to Land, (never included) beyond front- ier.	Articles Imported by Land, (never included) from beyond frontier.	Value of Articles Im- ported by Land, (never included) from beyond frontier.	Grand Total.	REVENUE.
1	Timber.....	Rupees 3,99,924	1	Cotton Free Goods 31,04,911	1	Cotton Free Goods 7,38,745	1	Cotton Free Goods 3,97,949		
2	Rice and Paddy.....	29,49,034	2	Silk do. 14,00,708	2	Silk do. 4,70,611	2	Silk do. 3,71,113		
3	Cash.....	7,12,902	3	Tea do. 12,65,713	3	Tea do. 9,04,900	3	Tea do. 90,759		
4	Starch-Lac.....	67,536	4	Woolens 3,02,513	4	Woolens 90,000	4	Woolens 1,04,674		
5	Hides and Horns.....	1,19,320	5	Timber 67,533	5	Rice and Paddy 12,67,745	5	Rice 20,212		
6	Lead.....	1,13,573	6	Wine Beer, &c. 5,44,984	6	Salt 2,40,717	6	Raw Cotton 47,475		
7	Petroleum.....	1,13,573	7	Other Goods 3,60,707	7	Petroleum 2,00,000	7	Tobacco 1,22,189		
8	Yellow Opium.....	53,798	8	Tobacco 3,60,707	8	Other Goods 14,50,595	8	Timber 53,244		
9	Copper.....	1,29,438	9	TREASURY.....	9	All Articles (never in- cluded above.) 2,30,111	9	Cash 57,171		
10	Raw Cotton.....	13,632	10	for Government 1,23,000	10	Lead 7,849	10	Stock-Lac 13,294		
11	Tobacco.....		11	for Private Parties 21,60,712	11	Copper 15,988	11	Iron 7,849		
12	TREASURY.....		12	All Articles (never in- cluded above.) 40,35,029	12	Sold Lead 19,923	12	Gold 15,511		
13	for Government.....	5,01,007	13	for Government 1,23,000	13	Petroleum 1,55,119	13	Petroleum 4,54,947		
14	for Private Parties.....	12,91,130	14	for Private Parties 21,60,712	14	Agar & Molasses 2,00,156	14	Agar & Molasses 2,00,156		
15	All Articles not enumerated above.....	19,50,628	15	All Articles not enumerated above.....	15	Lacquered Ware 4,26,176	15	Lacquered Ware 4,26,176		
						Hides, Bullock and Buffalo 15,641		Hides, Bullock and Buffalo 15,641		
						Hand-Ware 37,387		Hand-Ware 37,387		
						Metal-Ware 37,193		Metal-Ware 37,193		
						Tea (dry) 7,843		Tea (dry) 7,843		
						Tea (wet) 1,25,751		Tea (wet) 1,25,751		
						All Articles not enumerated above 4,26,176		All Articles not enumerated above 4,26,176		
	Total Rs.....	84,64,012		Total Rs.....	84,64,012	Total Rs.....		Total Rs.....	34,20,463	
										3,05,64,999
	Value of Exports and Imports by Sea.....	2,20,03,617		Value of Exports and Imports by Land, (never included) to and from the Frontier.....	85,59,683					

J.

ABSTRACT STATEMENT of the Value of all Imports and Exports by Sea and River to and from the Province of Pegu, during the year 1860-61, and Amount of Duty realized thereon, ending 30th April 1861—Fractions of Rupees omitted.

NAMES OF PORT OR CUSTOM HOUSE.		Value of Exports.	Value of Imports.	Total.	Amount of Duty realized.	REMARKS.
		Rupees.	Rupees.	Rupees.	Rupees.	
SEA	{ Rangoon ... Bassein	78,50,274	1,32,31,623	2,10,61,897	5,88,565	<i>Principal Imports by or on account of Government.*</i> Rupees. Agricultural Implements 228 Coals* 29,000 Treasure 1,23,000 Military and Ordnance Stores 4,05,866 Naval Stores 76,020 Commissariat Stores 4,04,082 Timber 3,978 Electric Telegraph Stores 8,982 Machinery 1,565 Opium 1,57,000 Stationery 1,965
		6,33,744	3,07,966	9,41,712	68,776	
		45,24,844	29,80,727	75,05,571	5,58,606	
		6,04,374	4,49,738	10,54,112	13,148	
		1,35,93,236	1,69,70,056	3,05,63,392	12,29,095	
Total						
RIVER	{ Meaday ... Toungoo					<i>Savings of pay not shown.</i> Rupees 12,11,686 Amount of Fines and Confiscations during the year 1860-61, not included in the amount of Duty 499 Rangoon 7 Bassein 5,904 Meaday 52 Toungoo 52
Total						Rupees 6,462

* Coals for stock were also purchased on account of Government from private Importers.

L.

ABSTRACT STATEMENT of the Amount Demand of Revenue for the year 1860-61, omitting fractions.

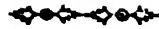
ITEMS OF REVENUE	DISTRICTS.						TOTAL.
	Bangon District.	Rangoon Town.	Bassein.	Pyaw.	H. mada.	Tharavaddy.	Toungoo.
1. Land	Rupess. 5,36,185	Rupess. ..	Rupess. 2,56,211	Rupess. 2,04,376	Rupess. 1,04,153	Rupess. 1,01,553	Rupess. 24,701
2. Capital Tax	2,24,090	2,24,090	1,43,880	1,06,374	5,75,599
3. Fisheries	1,21,061	5,115	41,113	12,784	43,941
4. Salt	41,213	..	149	..	7,519
5. Forest Produce	253	113	..
6. Excise	29,150	3,440	..
7. Sea Customs	61,078	..	..	..	56,486
8. Inland Customs	98,783	..	..	..	..
9. Port Dues and Marine Receipts	3,537	..	..	..
10. Timber and Miscellaneous proceeds of Forest Department	4,237	..	..	..	13,275
11. Fines and Fees on Criminal Proceedings
12. Sale of Unclaimed Property	21,880	..	..	..	..
13. Postage Stamps	1,030	24,211	15,608	5,423	5,281
14. Stamp on (Civil) Suits and Law Papers (only stamps)	1,030	2,389	443	41	7,498
15. Income Tax (only stamps)	12,317	2,626	7,063	2,412	1,945
16. Miscellaneous	6,914	2,704	4,300	1,854	3,140
17. Karon Chak Tributes	494	..	3,820	4,310	2,704
Total	23,03,304	12,696	8,72,779	11,48,112	4,10,374	2,28,614	1,84,784
							51,72,050

NOTE.—During the year 1860-61, Land to the amount of Company's Rupess 5,313 was sold in Rangoon, this is not included in the Regular Revenue.
 Ditto ditto ditto ditto ditto ditto ditto

STATEMENT of Local Taxes for the year 1860-61.

	Bang on District.	Rangoon Town.	Bassein.	Pyaw.	Hennada.	Tharavaddy.	Toungoo.	TOTAL.
Municipal Fund	Rupess. 4019	Rupess. 37,529	Rupess. 14,659	Rupess. 19,416	Rupess. 14,931	Rupess. ..	Rupess. 2,662	Rupess. 94,779
Beer Rent	..	..	..	19,416	13,530	..	..	47,610
Ferries	..	..	585	1,245	..	..	..	2,832
Rent on Town Lots	63,333
Total	4,019	1,00,962	21,760	40,964	28,961	733	12,533	2,09,194

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ANNUAL REPORT

ON THE

ADMINISTRATION OF PROVINCE OF BRITISH BURMAH. FOR THE YEAR 1861-62.

SECTION I.

INTRODUCTION.

1. On the last day of January 1862 the three maritime Provinces of India beyond the Ganges, which had been conquered from the Burmese Empire, were united under one local Administration, and called British Burmah. These provinces comprised the ancient kingdoms of Pegu and Arracan, with the long line of sea coast known as Tenasserim. The two last of these were acquired by treaty after the war of 1825-26. Pegu was occupied and retained consequent on the war of 1852.

2. The Province of British Burmah lies along the eastern shore of the Bay of Bengal, extending from the mouth of the Naf Estuary in about $20^{\circ} 50'$ north latitude, to the Pak-chan River in about $10^{\circ} 50'$. It possesses a direct line of sea coast of not less than nine hundred English miles, and a total area of ninety thousand square miles. Each division possesses one principal sea port, that is to say, Tenasserim has Moulmein; Pegu, Rangoon; and Arracan, Akyab. The first and last mentioned have risen entirely under British rule. Rangoon was founded by Alompra, the Burmese Conqueror, of Pegu, and was peopled by the inhabitants of the ancient capital, who were brought away for that purpose.

3. Arracan, the most northern division of the province, is separated to the eastward from Pegu and Upper Burmah by a range of mountains, which attains at its greatest elevation about seven thousand feet. The range runs nearly parallel with the line of sea coast and gradually lowers towards the south. The northern portion of the country has a large area of alluvial soil in the lower course of the River Kuladan and its numerous confluenta. The breadth of the land there, from the sea shore to the water-shed, mountains, is from

eighty to ninety miles. A large portion of the country is hilly, covered with forest, and difficult of access. The water-shed range, separating Arracan from Pegu, extends southerly, and between that range and the sea shore, for a length of nearly two hundred miles, as far as a point of land near Cape Negrais, the country is a mere narrow strip of land. For the last hundred and fifty miles the hills seldom exceed five hundred feet elevation. That portion of Arracan was united with Pegu when the latter was occupied by the British.

4. Pegu and Martaban lie in the valleys of the Irrawaddy and Sitang Rivers.

Pegu and Martaban—physical aspect.

These valleys, bounded east and west by mountain ranges, are narrow in the upper portions, but expand at the delta of the Irrawaddy into a magnificent alluvial region, penetrated by a vast number of tidal creeks, and extending over ten thousand square miles.

5. Northern Tenasserim is bounded to the west by the last hundred miles of the

Tenasserim—its physical aspect.

course of the great River Salween. This river, without a delta and with passless rapids one hundred miles from its mouth, which bar the ascent of boats to Central Asia, is joined at Moulmein by two streams, which facilitate communication with the interior. The breadth of land from the sea shore to the central mountain range, which divides the province to the eastward from Siam, is about eighty miles. This space is gradually narrowed to forty miles at the southern extremity in 11° of north latitude. There is no river of importance southward of the mouth of the Salween. The interior of the country is a wilderness of hills, thickly wooded, running in a general north and south direction with long narrow valleys.

6. Throughout the whole country the people belong to various branches of the

The people belong to the Indo-Chinese family.

Indo-Chinese family. They probably have come down, at a remote period, from the plateau of Central Asia by the courses of the Salween and of the eastern confluent of the Irrawaddy. The most advanced race is the Burmese, which, at the period of the British conquest, possessed the ruling power over the whole country. The Arracanese are of the same race as the Burmese, have the same name, and speak the same tongue, but have been isolated for many generations by their geographical position. The other tribes are the Mon or Talai, the ancient people of Pegu, also the Karen, Khyeng, Kamee, and other mountain races, which need not be enumerated. These tribes all have a general resemblance to each other; and as their dialects differ, the Burmese language, which is the mother tongue of three-fourths of the people, serves as a means of communication one with another.

7. The social condition of the people throughout the three divisions is generally

Social status of the people.

similar. Every where in the plains the occupied land is an allodial possession. The estates on the average do not exceed eight to ten acres. The agriculture is rude, but the fertility of the soil is

exuberant; there is only one grain crop in the year, and one cereal; rice is cultivated almost exclusively. The laws of inheritance and of marriage, the religious faith and the superstitious practices, the traditions, the feelings, the sympathies and the prejudices are generally alike among the people in the plains. But the hill tribes have not been won over to Bhudism. They have no idols and no priesthood. They still retain the ancient worship of the deities of the woods, the hills and the streams. Their languages are unwritten. Many of them are gradually settling in the plains, as the Karens commenced doing ages ago. All the tribes, as a general characteristic in the ordinary affairs of life, are frank, truthful and hospitable. They have plenty of food and clothing with reference to the climate. Whether in the hills or plains, the houses of the peasantry, built of bamboo, have the floors raised on platform, and never placed on the ground.

8. On the hills the people practise the barbarous mode of tillage called *toungya*, which consists in clearing a fresh patch of forest each season and burning the timber on the ground. They change their village sites at uncertain intervals, as the soil of the surrounding country becomes exhausted; while such wandering habits last, their condition cannot be materially improved. The remoter hill tribes are still in a savage state of isolation and independence; save in the district of Toungoo, where the ameliorating influence of education, and Christianity has wrought an entire change. Even the wilder among the hill tribes however, grow cotton, and weave cloth of strong texture and various colors.

9. At the principal sea ports Europeans and foreign Asiatics have settled in considerable numbers. Their knowledge, enterprise and capital have opened out markets for the timber, the rice, the petroleum and other products of the country which could not have been accomplished under the native government. The people generally, since the British conquest, have acquired a considerable amount of personal property. The small landed proprietors are independent and prosperous. The high rate of wages for a common day laborer, from six to eight annas a day, nine pence to a shilling, shows that the condition of the laboring classes is comfortable. Yet among the Burmese and other indigenous people there is no class that can be called wealthy.

10. In the present Report the result of the Judicial and Police administration of the three divisions for the year 1861, and that for revenue and general affairs up to the end of April 1862, have been combined. But as the divisions were not during the whole period subject to one local Authority, and the various statements and returns were not always rendered in the same forms, the means for strict and close comparison do not exist. The present Report, however, will serve as an index for comparison between the several divisions in future Reports upon British Burmah.

Reference to Appendix A.

11. In Appendix A. will be found a Tabular Statement of the area, population and revenue of each division of the Province.

SECTION II.—JUDICIAL.

CIVIL JUSTICE.

12. The number of Civil suits, original and appellate, (both regular and miscellaneous) instituted in the several Courts of the province during the past two years was as follows :—

	1860.	1861.
Appeals and original suits	33,491	21,990
Miscellaneous	16,370	11,627

showing a decrease of 11,501 appeals and original suits, and 4,743 miscellaneous cases. This decrease, which is nearly uniform in all three divisions, is owing to the Stamp Act, which did not come into operation until June 1860, affecting, therefore, only the latter half of that year, whereas its effects have been felt during the whole of 1861.

13. As stated in last year's Report, this diminution of suits is not to be attributed to any defect in the working of the Courts, or falling off in the prosperity of the people. It has simply relieved the Courts and the people from much hasty and vexatious litigation, to which the former excessive cheapness of legal proceedings offered every temptation.

14. In Pegu the cost of stamps filed in the several suits is in appeals 6 per cent., in original suits not quite 7 per cent. of the amount or value of the property litigated. In Arracan it is in appeals 16 per cent., in original suits 8½ per cent. The Stamp Law being the same in each province during the year, it is not apparent why there should be this difference, especially in the cost of stamps in appeals. This point is being enquired into.

15. In Table B. of the Appendix will be found a complete statement of the number of remaining suits pending from last year, instituted during the year, and pending at the close of the year in each division of the province.

16. The number of cases pending at the close of 1860 and 1861 respectively is as follows :—

	1860.	1861.
Appeals and original suits	685	565
Miscellaneous	194	219

being 2·6 per cent. of the original suits and appeals, and 1·3 of the miscellaneous cases instituted during the year.

17. Table C. of the Appendix shows the comparative working of the Civil Courts in the two divisions of Pegu and Arracan. Owing to different forms having been in use in the three provinces before they were united into one, it has not been practicable to complete this statement by adding a similar Return from Tenasserim.

18. The average duration of cases has not been excessive. There are only two cases which have been long on the file, one in Pegu and one in Arracan; the reason for their remaining undisposed of is in each case satisfactorily accounted for, and the delay has been owing to causes beyond the control of the Court.

19. The administration of Civil Justice in the province generally has been efficient and satisfactory. Each of the Commissioners reports very favorably of his district and subordinate Judges. That substantial justice is afforded by the several Courts the paucity of appeals is a convincing proof. Of 1,314 decisions passed by the Deputy Commissioners of the eleven districts into which British Burmah is divided, only 62 or 5 per cent. are appealed against, and in a large majority of these appeals the original decree was confirmed. The appeals from the subordinate Courts to the Deputy Commissioners, in like manner, bear a very small ratio to the number of decisions, and in these the decree of the Court below is more frequently confirmed than modified or reversed.

20. The information regarding the administration of Civil Justice in the Courts of British Burmah during 1861 is not so full as desirable; Complete information called for as to the year 1862. but attention has been called to this want in order that the Returns for 1862 may be complete.

SECTION III.

CRIMINAL JUSTICE.

21. In the Appendix will be found a Statement marked D. showing the number of persons apprehended on criminal charges, and how they were disposed of. That portion of the Statement will be remarked on under the Police section. In this section the information, which refers to the working of the Criminal Courts, will alone be considered.

Under trial or committed to Sessions at close of the year.

22. The number of prisoners remaining under trial or committed to the Sessions at the close of the year was 215, or ·08 per cent. of those brought to trial.

23. Twenty-one thousand five hundred and eighty-six witnesses were examined, of whom 17,358, or four-fifths were not detained more than one day. In this respect the divisions of Tenasserim and Arracan leave nothing to be desired. Pegu does not appear so favorably; but in this division the undue detention of witnesses is confined to the districts of Bassein, Myanoung, and the Town of Rangoon, in the order in which they are named. The detention of witnesses in the Bassein district was noted as excessive in last year's Report; and though considerable improvement is manifest during the year under review, it is not creditable that this district should be again distinguished from all the other districts of the province by the length of time witnesses are kept waiting before they are examined and discharged.

Examination and detention of witnesses.

24. The committals to the Sessions Courts and the manner in which they were disposed of are shown below :—

Division						Committed to Sessions.	Convicted.	Acquitted.	Died or escaped.	Pending.
Pegu	...	...	...	...	...	73	48	12	4	9
Tenasserim	...	...	...	...	...	73	55	17	..	1
Arracan	...	...	...	...	...	70	57	13	..	...
						216	160	42	4	10

25. Out of all the sentences passed by the Deputy Commissioners of the several districts only 123 were appealed against with the following result :—

Division.						Instituted.	Confirmed.	Modified or reversed.	Pending.
Pegu	...	...	...	...	...	23	17	3	3
Tenasserim	...	...	...	...	...	37	27	10	...
Arracan	...	...	...	...	...	63	38	25	..
						123	82	38	3

Nothing can prove more satisfactorily that the sentences passed by the Deputy Commissioners in charge of districts and the town Magistrates are generally sound and just.

26. The Commissioners of the several divisions report very favorably of the manner in which the several Officers under them have discharged their Magisterial functions, and the administration of criminal justice throughout the province is satisfactory.

SECTION IV.

POLICE.

27. Early in the year 1861 the organization of the Police in Pegu on the plan recommended by the Police Commission, which was subsequently embodied in Act V. of 1861, was commenced. The duty was entrusted to Captain H. T. Duncan as Inspector General. He began with the district of Prome, which, from being a border district, liable to the attacks of banditti from the Burmese territory, required early attention.

28. There were at that time two lines of posts along the frontier, extending from the Arracan hills on the west to the central ridge on the east, which divides the valley of the Irrawaddy from that of the Sittang. The more important of the posts were garrisoned by men of the Pegu Light Infantry. As the plan on which the Police was to be embodied rendered it necessary to disband that battalion, those men who volunteered to enter the Constabulary were enrolled therein, and at once with others who were transferred from the former Police corps were stationed in the frontier posts. These men were all armed with muskets as being liable to attacks by armed parties from without.

29. The front line of posts, facing to the north, is situated close on the border. It consists of eighteen stockaded posts, about eight miles apart from each other. The second line of posts is about fifteen miles in rear of the advanced line. It consists of ten posts. None of the posts on the Prome frontier have less than twenty men. Each communicates daily with the posts on its flanks. The superior Officers constantly patrol along the lines.

30. After the more important object of posting men at the frontier stations had been completed, Police posts were gradually established in such other parts of the Prome district as the nature of the country and the dangers to be guarded against rendered requisite. The duties of the Jail guards, the Court house guards and the Treasuries were taken, and the Municipal Police of the towns was brought under the same discipline in every respect as the Government force.

31. The Police is composed mainly of Burmese, who are the only men fit for service on the frontier and in the interior. In the sea-port towns and cantonments natives of India are chiefly employed, as being more likely to understand those with whom they are brought in contact.

Captain Duncan, the Inspector General, observes as to their qualities :—"The marauding bands who cross our northern frontier are well armed and bold in their attacks, but the Police have shown no reluctance to encounter them, even when considerably outnumbered."

32. The Village Police remains as it was before, but much reduced in number. It works in communication with the Constabulary. In each hamlet, where deemed necessary, an inhabitant receives the title of Kyedongyee. He is appointed by the district Officer. He is exempted from payment of capitation tax, and is bound to report to his immediate superior, the Goung, all crimes occurring within his hamlet. The Goung is a paid village or parish constable. He works in close communication with each adjoining Police post. He has under him an average area of eighty square miles. Both of these village Policemen are found to be of the greatest use to the Constabulary, and are, as a body, respected by the people.

33. It will not be necessary to describe the introduction of the Constabulary into each district or division of British Burmah. It will suffice to record that by the end of August the work was accomplished in Pegu, and the Inspector General proceeded to carry out the same plan in Tenasserim. The north-eastern portion of that division, where only a river forms the boundary with the Shan States subject to Siam, required careful attention. There the incursions of banditti were frequent, chiefly with the object of plundering timber dealers proceeding into the forests with specie to carry on their work. They also attacked such villages as seemed likely to yield plunder. By the end of the year the work of that part and down the long line of coast to the southward was accomplished.

34. In the districts near the frontier it has been found desirable to allow some of the villagers to possess fire-arms for their own defence; but great care has been taken to allow this privilege to well known men. The arms are paid for by the recipients, and a register is kept of them. The owners are not allowed to dispose of the arms without sanction. Many villagers have shown themselves well worthy of the confidence reposed in them.

35. In Statement E. of the Appendix will be found a Statement showing the full strength and cost of the Police in two divisions of British Burmah. That of Arracan has not been added, as the Police was not formed there until the middle of the year 1862. The Return shows a force of 4,101 men of all ranks in the regular Police; 217 boatmen and 670 village Police. The annual cost is Rupees 9,71,003, exclusive of the Inspector General.

36. Having described the existing Police force, the next point will be to narrate the amount and nature of crime, and the success which has been obtained in preventing it, or in discovering the perpetrators during 1861.

37. In Appendix F. will be found a Statement of the number of crimes ascertained to have been committed in each division during the last two years. The former classification of crime has been retained, but in future one suited to the Penal Code of India will be adopted. In Statement D., as showing the working of the Police, the number of persons arrested, convicted and acquitted, with the value of property stolen and recovered, are shown. The two documents together will fairly illustrate the state of crime and the efficiency of the Police in British Burmah.

38. A reference to Appendix F. will show that in 1861 there has been a diminution of violent crime during 1861.

Crimes of the First Class of Atrocity, or all attended with murder, or with wounding with intent to murder.

Year.	Number.
1860 ...	75
1861 ...	67

11

Still not less than 67 crimes, which involved murder or wounding with intent to murder, were committed. This is a very large number to occur in a population of about a million and three-quarters of souls. But it must be remembered that the majority of the worst crimes were perpetrated by armed bodies who crossed into British Territory to plunder, and in Arracan the plunderings committed by large bodies of armed men are the wars of hill tribes either among themselves or attacks upon villages in the plains. But the number of simple murders within the province without the accompaniment of plunder shows a terrible disregard of human life.

39. On the border of Pegu, notwithstanding the numerous posts and the vigilance of the guards, the country is so rugged, so thinly inhabited, and so covered with jungle, that it is easy for armed parties to enter at various points, by twos and threes, penetrate within the line of stations, and unite at an appointed spot for attack without being perceived by patrolling parties.

40. While in crimes there has been a decrease, yet in ordinary thefts there has been an increase except in Arracan. It is probable that under the new Police petty thefts are more fully reported than formerly. The number of cases of culpable homicide is large, being 25 against 17 of the previous year, and shows the readiness with which quarrels and disputes among these people are followed by blows, which too often prove fatal.

41. Throughout the province in 1861 there were 21,500 persons supposed to be concerned in crimes of every description; of these 25,401 were arrested, of whom 9,159 were acquitted and 15,912 convicted. The rest were otherwise disposed of, or were still under trial at the close of the year. In future years the number of persons concerned in heinous and in petty offences will be separately shown.

42. The proportion of convictions to arrests for the two years, omitting fractions, is 64 and 62 per cent. respectively, and the amount of property stolen was Rupees 2,96,809 in the former year against Rupees 2,16,346 in the latter; that recovered being Rupees 72,852 and Rupees 52,909, being nearly 24 per cent. for each year.

43. On the whole there has been a marked decrease in crime, especially in violent crime, during the year; but no satisfactory explanation has ever been given of the strange variation in the amount of crime in British Burmah. Up to the year 1858 crime had much diminished in Pegu. During that year gang robbery especially prevailed after having been effectually controlled in the two or three preceding years, when the disturbances consequent on the year 1852 had subsided. Since 1858 crime has gradually diminished, and, with the new Police arrangements, it is hoped will be put down as far as is possible in a country nine-tenths of which is covered with jungle, and affords such facilities for gangs of robbers to lurk in.

44. The sums raised for municipal objects, including Police in each division during the year, were as follows :—

				Rupees.
Pegu	...	...	...	92,414
Tenasserim	...	...	...	37,370
Arracan	...	...	...	...
				1,29,784

SECTION V.

JAILS.

45. The total number of Jails existing in the province during the year was thirteen, but of these two in Pegu, namely those at Henzadah and Mengyee (Tharrawaddy), were abolished during the year. The convicts were transferred to Rangoon.

46. The following Table shows the cost for each prisoner, the mortality and the escapes in each Jail of the Province during the year 1861:

DIVISION.	JAILS.	Average daily number.	Number of deaths.	Rate per cent. of deaths to average strength.	Total cost per prisoner.	Number of escapes.	Number of recaptures.	REMARKS.
					Rs. As. P.			
PEGU.	Rangoon	103	20	31	71 2 11	8	3	
	Bassein	204	10	31	66 0 7	1	3	
	Prome	216	16	7	65 3 1	4	2	
	Henzada	283	17	5	63 14 5	6	6	Jail abolished 11th September 1861.
	Mengyee	170	2	11	70 7 2	6	8	Ditto ditto 6th August 1861.
	Toungoo	143	21	17	62 12 8	9	9	
	Total	1,000	86	6	70 0 0	33	26	
TAYANGUN.	Moulmein	1,610	113	14	67 1 8	53	43	
	Shoay Gyeen	76	5	6	65 3 11	17	1	
	Tavoy	259			77 3 7	...	...	Returns defective.
	Mergu	202	20	0	69 8 2	25	10	
	Total	2,150	138	64	74 0 0	105	63	
ARRACAN.	Akyah	340	30	7 90	40 0 3	3	1	
	Ramree	296	23	7 77	54 13 0			
	Sandoway	220	16	7 11	30 12 3		2	
	Total	866	69	74	46 0 0	3	3	
	Grand Total	4,046	393	64	60 0 0	131	92	

47. The rates of mortality among prisoners in all the Jails of the Pegu Division are lower than they were last year. The rates are excessive in none but the Toungoo Jail. Five died of small-pox, and the Medical Officer, Dr. Gordon, remarks that the prisoners were generally healthier than the inhabitants of the town. In the Jails of the other division the rates are all moderate, except at Moulmein. In that Jail there are a large number of life prisoners, and many are kept in out-Jails for the purpose of being near to their work. A larger number of deaths might, therefore, be expected than in Jails where the convicts are all sentenced to stated terms of imprisonment, and are all within one enclosure.

48. There has been a general decrease in the cost of maintenance for each prisoner. In some Jails the decrease has been very great.

In the Jails of the Arracan Division the cost is lower than in any of the other Jails. A good deal has yet to be done in the Pegu Division, and also in the Shoay Gyeen Jail, for the reduction of expense on account of prisoners.

49. The number of escapes from the Jails of the Pegu and Arracan Divisions is not large. In the Tenasserim Division the large number of escapes from the Moulmein Jail is said to be owing to the prisoners having heard that they were to be transferred to the Andamans. Most of those who escaped were recaptured.

50. Owing to the high price of common labor in British Burmah, it is generally more profitable to employ the convicts outside than inside the Jail walls. Only a very small proportion of them are employed on the manufactures which can be carried on within the Jail walls. This description of work was carried on with much success in the Jails of Arracan.

51. The following Statement shows the gross cost of maintenance of each Jail with the exception of two, of which returns are wanting, and the value Government or the Municipal Authorities of the labor obtained from the working convicts, *i. e.* the actual cash profits derived from the Jail manufactures, and the value of the other labor performed by the convicts for Government for which cash was not required, calculating the daily hire of a convict at three-fourths of that of a free laborer:—

DIVISIONS.	1		2	3	4	5	REMARKS.
	JAILS.		Total cost of maintenance.	Actual cash earnings.	Value of labor supplied to Government not paid for.	Total value of labor.	
PEGU.			Rupees.	Rupees.	Rupees.	Rupees.	
	Rangoon	..	50,871	2,811	50,138	50,949	
	Bassein	...	10,650	...	22,989	22,989	
	Prome	..	18,401	...	14,041	14,041	
	Henzadah	...	12,524	1,318	11,205	12,532	
	Mongyee	...	7,797	...	5,078	5,078	
TENASSERIM.	Toungoo		10,671	...	6,891	6,891	
	Total	..	1,25,014	4,129	1,17,212	1,21,371	Only the value of the labor of those convicts who are employed by Government in other Departments than the Jail is included in column 4. The value of labor of those employed as Jail servants or in other offices connected with the Jail is excluded.
	Moulmein	.	80,799	18,005	71,940	90,845	
	Shaw Gyeon	..	...	..	...	...
	Mergu	...	19,840	3,128	16,894	20,070	
	Tavey	..	...	...	...	...
Total	...	1,00,639	22,081	88,884	1,10,015		
ARRACAN.	Akyah	...	18,840	3,174	4,611	7,785	
	Ramree		10,224	3,309	3,457	6,766	
	Sandoway	..	8,917	2,493	3,618	6,111	
	Total	.	44,011	8,976	11,686	20,662	
	Grand Total	...	2,74,664	35,186	1,12,244	2,52,048	

52. The gross Financial results of the year, exclusive of the two small Jails of Financial results, which the returns are wanting, therefore, were as follows :—

				Rupees.
Gross cost of maintenance	...	...	...	2,76,564
Value of labor	...	...	...	2,52,948
Balance against Jails	...	...	...	23,616

53. The average daily number of prisoners in the Jails was 4,948, the average Daily average number of prisoners, annual cost per prisoner, therefore, is only Rupees 55-14-3.

54. At Rangoon and Moulmein the great majority of the laboring prisoners were employed by the Public Works Department. The Value of convict labor to Public Works Department. the value of the labor performed by them was estimated by that Department as follows :—

				Rupees.
Rangoon	...	...	...	35,408
Moulmein	...	...	...	71,156

Total ... 1,06,564

55. The Jail of Moulmein, under the superintendence of the Executive Engineer, Excellent management of the Captain J. G. R. Forlong, was a model as regards the use Moulmein Jail. to which the labor of the convicts out of doors was turned ; the general discipline maintained, and the economy of expenditure. In all the Jails discipline has been maintained as far as is practicable when convicts go outside the walls to work, and as much work as possible has been exacted from them.

56. The system of employing convicts instead of hired peons as guards over Convict guards. prisoners has been largely introduced into the Pegu Jails during the year, and has met with success. The convict warders have portions of their sentences remitted for good behaviour. Colonel Fytche, the Commissioner of the Tenasserim Division, states on this subject, as regards the Moulmein Jail :—

“ The Convict Police have been found more efficient than the free Police, and with very few exceptions faithful to the trust imposed upon them. The guards in the interior of the Jail are entirely composed of convict peons. The free Police are distributed amongst the guard of convict gangs working outside the Jail, and are useful more as spies than guards.”

57. Orders have been received for all transported convicts at Moulmein to be transferred to the Andaman Islands. This measure will be carried out when the season admits of the men being shipped for a sea voyage.

Convicts under sentence of transportation to be sent to Port Blair.

SECTION VI.

REVENUE.

58. The year 1861-62 has been a prosperous one for each Division of British Burmah. Plentiful harvests have been accompanied by an increasing trade; and though the amount of annual taxation falls on each person about double what it does on the people of any other British possession in the East, yet there is no symptom of the burden being generally too great, although partial alleviation is in some instances desirable. The amount demand of revenue for the two past years, omitting fractions, has been as follows:—The amount for each Division shewn separately will be found in the Statement of the Appendix marked J.

				1860-61.	1861-62.
				Rupees.	Rupees.
1. Land	-	-	-	26,14,152	26,56,710
2. Capitation	-	-	-	14,60,519	17,33,035
3. Fisheries	-	-	-	4,77,055	5,06,568
4. Salt	-	-	-	95,830	73,704
5. Forest produce	-	-	-	6,893	9,073
6. Excise	-	•	-	8,43,608	7,90,115
7. Sea Customs	-	-	-	11,86,192	14,33,312
8. Inland Customs	-	-	-	5,78,971	5,31,769
9. Port dues and Marine receipts	-	-	-	1,90,523	2,85,863
10. Timber	-	-	-	5,46,842	6,84,297
11. Fines and Fees	-	-	-	1,74,493	1,47,362
12. Unclaimed property	-	-	-	9,517	5,789
13. Postage Stamps	-	-	-	40,875	40,793
14. Stamps in Civil Suits	-	-	•	52,243	2,42,591
15. Income Tax	-	-	-	2,14,341	3,33,907
16. Karen Chiefs' Tribute-	-	-	-	3,874	3,574
17. Miscellaneous	-	-	-	30,997	48,886
Total				86,26,925	96,27,648

Land to the amount of Rupees 16,097 was sold in the Town of Rangoon.

„	466	„	in Bassein.
„	3,884	„	in Moulmein.
„	98	„	in Mergui.
„	478	„	in Akyab.

These sums are not included in the regular revenue.

The following was the demand for local taxes :—

			1860-61.	1861-62.
			Rupees.	Rupees
Municipal	...	...	1,30,269	1,29,784
Bazars	...	...	79,614	67,768
Ferries	...	...	17,638	19,503
Rent on Town Lots	...	...	63,323	56,978
Cattle Pound Fund	...	...	4,915	4,804
Convict Labor Fund	...	...	1,60,855	10,700
Revenue Record Fund	...	...	.....	24
Tulabana Fund	...	...	.....	484
Total			4,56,644	2,90,045

LAND REVENUE.

59. In British Burmah the annual grain crop is dependant solely on the fall of rain for its growth, and failing which the cultivator has no resource. This is somewhat hazardous; but in the greater part of the country the cultivators generally keep grain in reserve to the following year. The rain has never been known to fail, though some seasons, especially in Upper Pegu, are more favorable than others. The past season was, on the whole, a good one; but there was not a sufficiency of rain in the northern portion of the Prome district.

60. In Pegu the greatest increase of cultivation occurred in the district of Rangoon. In Myanounng, which is the name of the combined districts of Henzadah and Tharawaddy, a serious loss occurred from the bursting of a large embankment mentioned in last year's Report as having been built to keep out the inundation of the Irrawaddy.

61. In Tenasserim there was an increase due partly to extension of cultivation, and partly to more careful measurement of the area cultivated.

62. In Arracan there was a decrease of land revenue owing to a murrain among the cattle, which caused much land to be left fallow.

Decrease in Arracan.

63. The land revenue is mainly dependant upon the export of grain. The quantity sent away from each division is shewn as follows :—

Export of grain.

				Tons.
Pegu	...	...	...	216,144
Tenasserim	...	...	...	30,705
Arracan	...	...	...	106,830
Total				353,679

64. During the quarter the arrangements for the settlement of the land revenue were carried on in the districts of Rangoon and Bassein under the direction of Captain McMahon. As has been explained in former Reports, the object is two-fold :—*First*, to fix rates per acre on each *queng* or block of land having well known boundaries ; and *second*, to settle with the cultivators the annual revenue payments for ten years, instead of the annual re-assessment heretofore prevailing.

65. The field work for the year commenced on the 22nd November 1861, and closed on the 10th May 1862. The operations extended over country containing 9,400 square miles, within which area 131,000 acres were assessed. More might have been accomplished had the cultivated lands been less scattered, but they were much further apart from each other than the lands assessed in former years. The result of the revision of previous rates per acre has been that on 637 *quengs* the rates per acre have been increased ; on 132 *quengs* the rates have been decreased ; and the rates on 278 acres have remained unaltered. The net increase of annual assessment in consequence of the season's operations will be Rupees 35,800.

66. With reference to leases or a settlement of land revenue for ten years the year's operations cannot be termed successful. The inhabitants of forty village tracts, representing 7,600 cultivated acres of land, paying annually Rupees 14,800 to Government, have accepted leases. Fifteen separate cultivators, possessing 794 acres, paying annually Rupees 312, have also taken leases. But that is a small proportion of the whole area visited and assessed. The prejudice or opposition to the leases still continues strong in the Rangoon district. In that of Bassein the cultivators were found less determined in their opposition.

CAPITATION TAX.

67. The rate of capitation tax was increased twenty-five per cent. in Pegu and Tenasserim in consideration of the License and Tobacco Taxes not being imposed, and also on account of the Income Tax not being extended beyond the chief towns. The present rate of capitation tax in

Pegu is Rupees five per annum for a married family. This amount, there is no doubt, is now more readily paid by the people than was the rate of four Rupees when the tax was first imposed in 1858. The increased amount collected partly arises from the increased population. In some of the towns, where a considerable non-Burmese population exists, a tax upon the area of houses has been substituted for the capitation tax.

FISHERIES.

68. The nature of this item of revenue has been explained in former Reports. The lakes, fens and ponds are rented out within defined limits for a fixed annual sum to the villagers in the vicinity; licenses are granted to applicants at fixed rates for the right to work nets and other implements used in fishing on the sea coast and in the rivers and navigable streams. The greater part of the fish caught is made into fish paste for sale in the interior. No revenue is raised on fisheries in Arracan.

SALT.

69. A small duty is levied on the manufacture of salt. A fixed rate for the year is placed on the vessels used throughout the season for boiling the brine. As the people pay a capitation tax, the amount of duty on the manufacture of this mineral is not rated higher than about three per cent. on the value thereof. The rates of duty, however, have hitherto varied in the different divisions of British Burmah, and it will now be necessary to equalise them. The amount realised from this source of revenue varies considerably in different years. In Pegu and Arracan there has been a decrease during the past year. In Tenasserim there was a slight increase.

FOREST PRODUCE.

70. In this are included the sums paid to Government for the right to collect bees' wax and edible bird's nests found in caves on islets off the coast.

EXCISE.

71. Under Excise are included the Abkaree collections, being fees on distilleries, and licenses to sell liquor, also net profit on the sale of Opium.

SEA CUSTOMS.

72. The increase has been considerable, arising chiefly from the large export of rice from Pegu and Arracan. In the Appendix will be found Tabular Statements marked G., H., I., giving full details of the Trade and Customs duty. The duty realised on account of Sea customs,

including fines and confiscations during the year, has been £144,500. The total value of the trade for the year by Sea was as follows :—

			Rupees.
Imports	...	...	2,62,55,849
Exports	...	...	2,88,56,079
Total	...	...	5,51,11,928
			or <u>£ 5,511,192</u>

INLAND CUSTOMS.

73. Inland customs exist only in the Pegu Division. In the year under review there was a fair increase arising from the augmented export of salt, salted-fish and grain. The total amount collected was £61,900.

Reference to Section XI, Marine.

74. Port dues and Marine receipts are explained in Section XI, Marine.

TIMBER.

75. The revenue arising from timber consists of fees derived from the issue of permits to work in the Government forests: the price paid on logs brought down from the Government forests by permit-holders, the price realised by sale of timber brought down by the Forest Department, the duty on foreign timber brought within the British territory, and duty on timber from forests owned by private persons. These sources of revenue are more particularly explained in Section XVII, Forests. But the Timber Revenue Department in the Tenasserim division is a distinct Office, where duty is levied on timber, whether from British or foreign forests, as passed from the bonded station for sale or otherwise. The sum collected on this account at Moulmein during the year amounted to Rupees 2,67,412. This large amount arises from the vast quantity of foreign teak timber brought down, amounting to 106,432 logs.

Timber revenue.

STAMPS.

76. There is a steady increase in stamps used in Civil suits and for law papers.

Stamps.

INCOME TAX.

77. The Income Tax is limited in British Burmah to the chief towns. The amount yielded appears sufficient to shew that excessive concealments do not take place, but that on the whole incomes and profits are fairly taxed.

Income Tax.

There are no other items of revenue which call for special remark.

Waste land not yet sold.

No land has yet been sold under the Resolution of Government, dated the 17th October 1861.

SECTION VII.

EDUCATION.

78. In the Report of last year on Pegu it was stated that the Government School at Rangoon was not in a satisfactory state. The classes were examined by the Committee at the close of the term of 1861. The Report states that no improvement had then taken place. There were 29 scholars.

79. The Pegu High School at Kemendine near Rangoon, for Karens under the charge of Mrs. Vintor, had an average of 110 pupils during the year. At a public examination at the close of the year they acquitted themselves satisfactorily. The first class study English. There are in connection with this school twenty-five village schools for elementary instruction, having 350 scholars.

A separate school for Pwo Karens is under the care of the Reverend Mr. Brayton. It has an average attendance of fifty scholars, and though lately established is making good progress.

A Theological Institute for the instruction of Karens who are designed for the ministry may also be noticed here. The Principal is the Reverend Dr. Binney; the study is designed to be biblical and theological only, but in some cases a previous elementary course of instruction is necessarily given. There were fifty-seven students during the past year.

80. At Toungoo the Karen Young Men's Normal School has progressed favorably; it had an average of seventy pupils during the session. A powerful telescope given by Government to the institution was received during the year, and has been turned to good account. The Karen Female Institute is superintended by Miss E. Mason; had from forty to fifty young women students. Their progress was satisfactory.

81. One hundred and thirty-five village schools were in operation in the mountains during the year, having two thousand one hundred and eighty-six scholars. On the progress of the cause of education among the mountain Karens the Reverend Dr. Mason remarks as follows:—"Judging the Karens by their deeds, there is no lack of interest in the work of education. Their contributions for the two boarding schools in town amount to 1,488 Rupees, and their contributions in money to their Teachers in the jungles were upwards of 1,100 Rupees. Besides this they brought in 450 Rupees this year towards the erection of a dwelling

house on the institution grounds for the American or European Teacher of the Young Men's School."

82. At Henzadah the Reverend Mr. Thomas, in consequence of sickness in the district, reduced the Karen Normal School in the town, and commenced some schools in the interior of a higher order than heretofore. The benefits of more advanced education were given to a greater number of pupils, but they could not be so thoroughly superintended as if all had been assembled at the town. There were in all ninety scholars instructed through the Karen language. In addition to the studies of former years surveying with the prismatic compass has been commenced last year.

Henzadah Schools.

83. In Prome four elementary schools, having one hundred scholars, have been established under the care of the Reverend Dr. Kincaid. Burmese and Khyengs are chiefly taught.

Prome Schools.

84. At Bassein there is a very flourishing school under the Reverend Mr. Beecher, having ninety-seven scholars in the Vernacular Department, and one hundred and eight in the Anglo-Karen Department. This school has no grant-in-aid yet. It well deserves one.

Bassein School.

85. In the interior there were twenty-five village schools with six hundred and eleven scholars, also a Pwo Karen High School with seventy-eight pupils under the care of the Reverend Mr. Van Meter, and one hundred and nine of the same race in village schools.

Village Schools.

86. The school maintained in Rangoon by the Burmese Female School Society contains twenty pupils. They are taught through the Burmese language in elementary knowledge, and sewing and weaving.

Burmese Female School.

87. From the Right Reverend Bishop Bigandet the following information has been derived regarding the schools of the Catholic Mission in Pegu. A Boys' School at Rangoon has an average daily attendance of 125. The boys are chiefly Eurasians and Burmese. The instruction is through the English language, but Burmese is also taught. There is likewise a Girls' School, having thirty-five pupils. Schools have been established in the interior of the district of Rangoon, Bassein and Myanounng. These are chiefly for the instruction of Karens; they contain altogether one hundred and twenty pupils. The Boys' School at Rangoon is especially deserving of a grant-in-aid, which it is hoped will soon be given.

Schools in Pegu maintained by the Catholic Mission.

88. In Tenasserim there is a Government School at Moulmein, which the Commissioner reports "has been falling off in the number of pupils for some years past, and it has been recommended that it be abolished altogether, and grants-in-aid bestowed upon the schools attached to

Tenasserim—Moulmein Schools.

the different Missions and private Schools." The average number of pupils attending throughout the year was sixty-one.

89. A school maintained by the Society for the Propagation of the Gospel exists at Moulmein. It was established in 1859, and during the past year has been under the direction of Mr. E. Marks. The school had two hundred and eighty-five pupils, chiefly Burmese and Talaings. All pay a school fee; there are forty boarders. The instruction is given almost entirely in English. The school has been very successful. The progress it has made, and the consideration in which it is held by the people of the country are very creditable to the management of Mr. Marks, and of those who preceded him. It well deserves a grant-in-aid.

90. The other schools at Moulmein are a Boys' and a Girls' School under the American Baptist Mission, having seventy and forty pupils respectively. These are chiefly Burmese and Talaings. A Boys' School of one hundred and thirty-five, and a Girls' School of seventy under the Catholic Mission, and a Church of England Orphanage with twenty pupils. In all these institutions the education given is plain and useful. Grants-in-aid, it is hoped, will be bestowed on them when funds are available.

91. In Arracan there are two Government Schools—one at Akyab and one at Kyouk Phyoo. The former contained during the year one hundred and seven paying pupils. They are taught in English and Burmese; they all pay schooling fees. The Head Master is Mr. Fell. The Commissioner reports favorably on the school. At the Kyouk Phyoo School there were seventy-one pupils studying English and Burmese; there is no first or head class to this school; the boys, it is stated, having left, and no others being sufficiently advanced to rise into that class. The master is a Mr. de Costa.

92. On the whole the means for giving a sound education to the masses of the people in British Burmah are, as compared with their numbers, not inadequate. There is ample scope for the beneficial extension of grants-in-aid from Government to the schools maintained by the several Missions in the province, and such aid will probably lead to more schools being established. There are no existing means for carrying out a general plan of vernacular education in the interior by direct Government Agency, and the best substitute for such a plan will be that of supporting the village schools already established by Missionaries, in which a sound elementary education is imparted.

SECTION VIII.

PUBLIC WORKS.

93. The accounts of the Public Works Department in British Burmah have only been made up for the two divisions of Pegu and Tenasserim. The Arracan Public Works accounts for 1861-62 are included for that year in the Bengal disbursements.

94. The total imperial outlay during the year on public works, including an advance of Rupees 94,056 made to local funds, has been
 Total outlay. Rupees 14,16,354, in addition to which Rupees 34,954 have been defrayed from local resources, and convict labor has been given to the value of Rupees 75,096 forming an aggregate total of Rupees 15,26,404.

95. The Budget cash allotment for Pegu was eleven and a half lakhs of Rupees, of which Rupees 11,48,855 were drawn; and for Tenasserim two and a quarter lakhs, of which only Rupees 1,72,200 were required owing to reductions effected. No money has been drawn within the year from the one per cent. Income Tax assignment; the allotment having been received too late to be turned to profitable account within 1861-62. It will be used in the current year 1862-63.
 Budget allotment not exceeded.
 One per cent. Income Tax assignment not spent.

MILITARY.

96. The total outlay on Military works and repairs has been Rupees 8,52,451, of which Rupees 6,12,393 have been expended on new works.
 Military works.

97. At Thayetmyo the north and south guard houses to the redoubt have been constructed. At Toungoo the redoubt is not yet completed owing to restrictions on expenditure and the withdrawal of the Sappers. At both these frontier stations arrangements have been made for placing the Government treasure within the redoubts.
 Fortifications.

98. At Rangoon the barracks for the European Artillery and Infantry have been shingle-roofed as a precaution against fire. Also the accommodation has been similarly extended so as to provide for a full Regiment, and three large shingle-roofed barracks have been built for the married families. At Thayetmyo temporary accommodation has been completed for a Wing of European Infantry, as also for the Artillery Driver Company, and for their married families. The temporary barracks at Meeaday have been removed and re-erected at Thayetmyo, and stables and other minor buildings have been erected for the Artillery. At Toungoo the European Infantry Barracks have been shingle-roofed, and many of the minor buildings improved. At Moulmein the barracks have been adapted for the accommodation of the married families of the Pegu Sapper Battalion. The outlay upon new works for accommodation for troops has been Rupees 3,76,412.
 Accommodation for Troops.

99. At Rangoon the arsenal buildings in progress last year have been completed. A guard-house has been built for the Magazine; iron verandahs have been put round the general store-room, and the enclosure wall of the arsenal is in progress. At Thayetmyo a Gun-shed, Laboratory, workshop and forge, a second Magazine, and an Ordnance Godown have been built. At
 Ordnance.

Toungoo the Ordnance Godown in the redoubt has been all but completed, and the Magazine quite so. At Moulmein a Magazine Guard-room has been built. Total Ordnance outlay for new works Rupees 1,27,090.

100. At Thayetmyo the Commissariat Depôt has been completed. This fine block of permanent buildings has altogether cost Rupees 1,11,265. A fire at Thayetmyo would have cost Government three times that sum in the value of Commissariat stores. At Toungoo a bakery and some minor buildings have been constructed. Total Commissariat outlay for new works Rupees 50,579.

CIVIL BUILDINGS.

101. The outlay on Civil buildings and repairs has been Rupees 2,12,219.

102. At Henzadah the Court House has been shingled. At Myanoung Court House accommodation has been provided by purchase and by the conversion to that purpose of the buildings of the late Pegu Light Infantry. The new Court House at Moulmein has been well advanced towards completion, and that at Mergui is in progress. A Circuit House has been provided at Moulmein by purchase. Outlay on new works Rupees 67,550. A new Court House is in progress at Kyauk Phyoo, not included in the above expenditure.

103. At Bassein the Jail surrounding wall has been completed. At Rangoon two new wards have been built for debtors and females ; also a Jailor's house and gate guard-room. At Tavoy a Jail was commenced but postponed ; and at Moulmein Jail work-sheds have been built, and several other minor works. Outlay Rupees 59,725. Six new temporary wards were also completed in the Akyab Jail in the early part of the year.

104. For the Customs Department nothing has been done during the year beyond the re-roofing of the Moulmein Custom House.

105. At Rangoon Trinity Church in the town has been commenced, and the construction of a permanent Post Office is in progress.

WORKS OF PUBLIC IMPROVEMENT.

106. The total outlay on works of public improvement has been Rupees 2,89,587.

107. At Rangoon a commencement has been made upon the permanent surface drainage works for the town, and iron tramways have been laid down for the conveyance of earth for filling in low ground. At Rangoon Rupees 38,172 and at Moulmein Rupees 33,891 have been spent

in the repairs and maintenance of the town roads, besides numerous minor works executed. At Bassein the bazar has been completed, and bazars have been ordered for Prome, Thayetmyo, Shoay Gyeen and Toungoo, and one is in progress in Mergui.

108. The Dalla Dock-yard has had its store godown completed, and the guard-house gate and surrounding wall have been constructed.
Marine. A new Marine Office is in progress at Moulmein, and extensive works in connection with a new harbour jetty and sea-retaining wall have been in progress at Akyab.

109. A large embankment, termed the Anouk Pek bund, has been constructed in the Henzadah District to protect land from inundation.
Agricultural. About fifteen thousand acres of cultivation are thus protected.

110. The mountain road leading from Prome into Arracan has been cleared, repaired and improved, as have also the roads from Prome to Pongday and to Meeaday. The road from Moulmein towards Yey has been opened out for upwards of twenty miles, a branch road has been constructed to Mopoon, a road made to Tongwine, and another nearly completed from Oboo to Nanutay. Roads have been projected towards the Shan frontier from Moulmein. The total amount expended on the improvement of communications has been Rupees 1,17,010.

ESTABLISHMENTS.

111. Great progress has been made in the adjustment of arrears of Public Works
Arrears of Office work brought up. accounts; 1,314 Bills, aggregating Rupees 43,24,310, have been prepared, and Executive Engineer's accounts including unadjusted arrears from 1859-60, have been passed to the amount of Rupees 20,21,912.

112. The cost of establishments in the Public Works Department has been Rupees
Cost of Establishments. 229,367, or 15 per cent. on the total expenditure, or nearly 17½ per cent. on the net expenditure.

113. The Chief Engineer notices with approbation the
Services of Officers. services of the undermentioned Officers:—

Assistant to the Chief Engineer, Lieutenant S. T. Trevor.

Deputy Controller of Accounts, Major F. N. Smith.

Executive Engineers.

Captain G. de P. Falconnet, at Thayetmyo.

Captain E. Leeds, Rangoon Cantonment.

Captain J. M. Williams, Rangoon Town.

Mr. P. Magrath, Division of Roads.

SECTION IX.

POST OFFICE.

114. The Post Office communication from Eastern Bengal to Arracan is maintained by land as far as Akyab. From thence the Mails are carried by boat to the southern portion of Arracan. From Calcutta Mails are conveyed fortnightly by steamer to Akyab, Rangoon and Moulmein. There is no land Mail between Arracan and Pegu. It has been tried and was abandoned as expensive and slow. From Rangoon Mails are conveyed fortnightly up the Irrawaddy by steamers, and to the frontier station of Toungoo by boats on the Sittang River. From Moulmein there is a land Mail to Shoay Gyeen on the Sittang River, and the Mails there meet those from Rangoon going to Toungoo. The southern stations on the Tenasserim coast receive their Mails by Steamer from Moulmein monthly.

115. In British Burmah almost the only persons who use the Post Office are the Foreign residents, that is Europeans and Indians. The receipts are slowly increasing.

116. The following are the statistics from the chief Post Offices of Tenasserim and Arracan. No returns have been received for Pegu :—

				Total covers received during 1861-62.	Total covers despatched during 1861-62.
Moulmein...	...	...	...	97,199	82,280
Akyab	...	...	...	61,114	84,135
Total ...				1,58,643	1,66,715

SECTION X.

ELECTRIC TELEGRAPH.

117. No addition has been made to the lines since last year. The frequent stoppage of communication by the deep sea cable between Akyab and Kyouk Phyoo shows the necessity of seeking a land route by which to lay the wire to Promé, instead of the present line which crosses one broad bay and a wide arm of the sea.

118. A line to connect Rangoon with Moulmein has been sanctioned by Government, and will be proceeded with when the season permits. It will be a land line from Shoay Gyeen.

SECTION XI.

MARINE.

119. The Marine Establishments of the province, consists of two Sea Steamers, the *Nemesis* of a hundred and ten horse power, and the *Pluto* of ninety; they are attached to the divisions of Tenasserim and Arracan respectively. For the Coast service of Arracan also there are two schooners and four row-boats. For the Pegu Division there is the Irrawaddy Flotilla, which will be more particularly described below.

120. The Port Establishments at Moulmein, Rangoon, Bassein and Akyab consist of buoy vessels, several boats, one light ship at Rangoon, and a light house at Akyab. These are under the immediate orders of the Master Attendant or Harbour Master of each port. The Pilots at the several ports receive licenses, after examination. All vessels entering any of the ports pay dues at the rate of four annas a ton of the ship's burden. At Rangoon, where the outlay to benefit the port is greater than elsewhere, the dues amount to six annas a ton. A tonnage rate of two annas was imposed on vessels entering the port of Amherst by Act VIII of 1861.

121. The strength of the Irrawaddy Flotilla during the year consisted of two Steamers and two troop-boats kept running; two Steamers and a troop-boat laid up, and one Steamer kept in reserve with a reduced establishment for any sudden emergency.

122. In Appendix K will be found the total expense of the Flotilla and Dock-yard at Rangoon for the year ending the 30th April 1862. The cost of each was—

Flotilla	...	...	...	Rupees	1,41,373
Dock-yard	...	...	...	„	55,199
Total	...	...	...	Rupees	1,99,572

The expenditure thus shown includes every thing incurred on account of pay of all ranks, for stores and repairs of the vessels of the Flotilla, together with the cost of establishment for the Dock-yard and for Office contingencies.

123. The following sums are not included in Statement K as having been incurred on account of British Burmah, because they pertain to other Governments, or only indirectly to British Burmah, and the proportion to be debited against that province cannot yet be fairly ascertained. These sums are Rupees 10,544 on account of the Algnada Reef Light House; Rupees 9,655 for Bengal, Bombay, and other vessels; and Rupees 58,000 for coal and pilotage to ships

of the Indian Navy and of the Bengal Marine. A considerable portion of this expenditure is undoubtedly on account of the Military charges of British Burmah, not for Marine requirements.

124. Taking the above sum of Rupees 1,99,572 as the actual expenditure on account of the Irrawaddy Flotilla and Dock-yard as far as Receipts, actual and *pro forma*. relates to British Burmah, the following are the offsets for the year :—

	Rupees.
(i).—Cash earnings of the Flotilla for freight, passage and towage ...	55,018
(ii).—Fines and refunds	513
(iii).— <i>Pro forma</i> credits on account of transport of Troops, Commissariat and Ordnance Stores	1,02,055
(iv).—Cash collections for work done in the yard for private persons, hire of dock, &c., and actually collected during 1861-62 ...	55,538
(v).— <i>Pro forma</i> credits for wages of artificers employed on repairs of vessels belonging to the Indian Navy, the Bengal Presidency, &c.	16,393
Total	Rupees 2,29,547

This shows then, on the whole, a small profit of Rupees 20,975 on the transactions of the Flotilla and Dock-yard, not including wear and tear, and cost of buildings.

125. As regards the ports of Pegu, the receipts and disbursements have been as follows :—

PORTS.					Receipts.	Disbursements.
					Ra.	Ra.
Rangoon*	...	...	...	...	60,072	44,940
Bassein	...	...	...	...	7,393	12,555
Total					67,465	57,495

showing an increase in the receipts of nearly one hundred per cent. over the previous year. The increase is owing to the greater number of vessels which arrived during 1860-61. The port dues claimable on Government vessels in the ports of Pegu, and not collected, amounted to Rupees 4,488.

Including Wharfrage.

Vessels arrived and cleared
out at ports in Pegu.

126. The following Table exhibits the numbers and
tonnage of vessels which arrived and departed during the
year :—

Ports.	Description.	ARRIVALS.		DEPARTURES.	
		No. of Vessels.	Tonnage.	No. of Vessels.	Tonnage.
Rangoon	{ Private Vessels ...	438	157,472	429	137,787
	{ Government Vessels ...	19	16,252	19	16,052
Bassein	{ Private Vessels ..	83	29,606	83	29,571
	{ Government Vessels ...	...	...	...	...
	Total ...	540	203,330	531	183,410

During the year the sum of Rupees 5,174 was received on account of wharfage for vessels unloading at the main Wharf at Rangoon.

127. In Statement K will be found the cost of the Marine Department in
Tenasserim. The Steamer *Nemesis* is employed to com-
municate with the stations on the southern Coast, and also
with Port Blair. The cost of her establishment, stores and expenses is estimated as
amounting to Rupees 50,000 during the past year.

Moulmein Port Fund—receipts
and disbursements.

128. The receipts and disbursements of the Moulmein
Port Fund were as follows :—

	Rupees.
Receipts	36,541
Disbursements	10,052

There has been a considerable increase in the receipts during the past year, and the balance against the Fund is now trifling ;—when the new Light House on Double Island is completed, the cost of that building and the establishment will have to be debited against this Fund.

129. The cost of the Steamer *Pluto*, including establishment and fuel, during the
year, amounted to Rupees 44,694; the amount for stores is
not given separately. The several boats of the Flotilla cost,
including every thing, for the year Rupees 25,275. To balance these charges, the
cash receipts on account of private freight and passengers by the Steamer amounted
to Rupees 26,890, and the *pro forma* credit for conveyance of Government freight and
passage by Steamer amounted to Rupees 8,505. The Steamer, therefore, paid her ex-
penses within Rupees 10,000.

Port Funds. 130. The receipts and disbursements in the Fund were as follows :—

			Rupees.
Receipts	...	...	25,155
Disbursements	...	...	11,436

The vessels which arrived and departed during the year were—

Ports.	Description.	ARRIVALS.		DEPARTURES.	
		Number of Vessels.	Tonnage.	Number of Vessels.	Tonnage.
Akyah	{ Private vessels ...	239	117,177	234	114,458
	{ Government vessels ...	2	638	1	238
Kyauk Phyoo ...	{ Private vessels ...	11	665	13	1,044
	{ Government vessels ...	2	580	2	530
	Total ...	254	119,010	260	116,270

SECTION XII.

FINANCIAL.

131. A reference to Statement J of the Appendix will show that the total amount of demand for imperial revenue in the Province of British Burmah, on account of 1861-02, amounted in round numbers to ninety-six and a quarter lakhs of Rupees, or £962,700.

132. By reference to Statement K of the Appendix it will be seen that the expenditure on account of the Civil administration during the same period was in round numbers forty lakhs. The whole of the expenditure on account of the Military establishments during the year has not yet been ascertained, but the following is believed to be a close approximation to the actual amounts :—

Artillery.

	Rupees.
1 Horse Battery complete ...	1,95,000
2 Reserve Companies ...	1,40,000
Mountain Train howitzers, ponies	5,000
Total	3,40,000

Infantry.

	Rupees.
2 European Regiments	14,00,000
3 Native Infantry Regiments	9,30,000
1 Local Corps	2,00,000
Total ...	25,30,000
Staff	2,00,000
Ordnance, Commissariat and Medical Departments ...	1,30,000
Cattle	1,93,000
Total ...	5,23,000

or, in round numbers, thirty-four lakhs of Rupees. The only remaining item of expenditure is the Public Works Department, which in 1861-62 expended in Pegu and Tenasserim Rupees 15,26,000. To this sum has to be added about one lakh for Arracan; and the whole expenditure of British Burmah is shown to be in round numbers as follows :—

	Rupees.
Civil Administration	40 lakhs.
Military „	34 „
Public Works „	15½ „
Ditto for Arracan	1 „
Total ...	90½ lakhs.

This leaves about six and a quarter lakhs of Rupees for the expenditure in the Miscellaneous expenditure. Electric Telegraph, the Post Office, the Geological Survey, the Mail Steamers, and the Steamers employed in the relief of troops; the disbursements on those accounts cannot be estimated here.

Financial condition satisfactory. 133. The financial condition of British Burmah, however, may be considered as satisfactory.

SECTION XIII.

POLITICAL.

Burmah. 134. No event of importance has occurred in the intercourse with the Government of Burmah.

Karenge. 135. The Karenge States have had the usual petty disturbances among themselves.

136. The Commissioner of Tenasserim reports that the Shan States, tributary to Siam, continue to show a friendly desire to suppress robbery and cattle-stealing on the border.

137. No certain information has been received relative to the state of affairs in Yunnan. But the absence of caravans of traders shows that the country is still disturbed.

SECTION XIV.

MILITARY.

138. In the Report for last year on Pegu it was stated that considerable reduction had been made in the Native Infantry force and in the Artillery of the Pegu Division. The whole of the proposed reductions have now been carried out. The strength of the regular troops, European and Native, now in British Burmah, amounts to 2,232 of the former, and 3,305 of the latter, or a total of 5,537, not including Officers. The force is larger than it will be eventually; as the death vacancies in the Pegu Sapper Battalion will not be filled up, and the Battalion will be replaced by a Regiment of Native Infantry one-third less in number.

The strength of the regular troops in the Pegu Division, at the close of the year 1860 was 2,373 Europeans, and 9,405 Natives, or a total of 11,778, not including Officers.

Pegu Light Infantry and Arracan Battalion.

139. The Pegu Light Infantry has been finally broken up, and the Arracan Battalion is now in course of being disbanded.

140. Consequent on these reductions the Fort of Meeaday, on the left bank of the Irrawaddy, and six miles from the frontier, has been abandoned, and the defences have been dismantled. The troops on that part of the frontier are concentrated at Thayetmyo on the right bank of the Irrawaddy, three miles below Meeaday.

141. The final disbandment of the Arracan Battalion may be noticed here, though the measure was not completed until after the close of the year. This was a Light Infantry corps, raised during the first Burmese war in 1824. It was composed of Arracanese, and latterly with a portion of Munipoorees and men of adjoining hill tribes. The Battalion has done good service in the hill warfare of Arracan,—a country where regular troops have great difficulty in moving. On the occupation of Pegu the corps was brought round to be employed in subduing those portions of the country where partisan Chiefs carried on a desultory but harassing war. In such jungle skirmishes the Commanding Officer Captain H. Barry was killed, but the battalion did its duty well and quieted the country; some of the men have been drafted into the Constabulary, and the Native Officers and Non-Commissioned Officers have received pensions or gratuities. *

SECTION XV.

POPULATION.

142. Throughout British Burmah a census of the whole population is taken yearly at the time that the rolls for the capitation tax are made out. This census does not extend to those towns where a house tax is levied in lieu of the pole tax. But the population of the towns is numbered at intervals, and the total number of people, as shown in the annual statements, is believed to be substantially accurate.

143. Of the three divisions of British Burmah Pegu is by far the most populous, and has made the most rapid progress within the last three years. This is shown by the following figures :—

DIVISION.	TOTAL NUMBER OF SOULS IN		
	1859.	1860.	1861.
Pegu	948,371	1,041,340	1,150,189
Tenasserim ... ..	...	332,542	371,402
Arracan... ..	...	...	370,306
Total ..	948,371	1,373,882	1,597,897

In Pegu the large increase is to be attributed to the immigration which set in steadily from the Burmese territory four years ago, and which still continues.

144. The various races in the country are as follows :—

RACES.	DIVISIONS OF			TOTAL.
	Pegu.	Tenasserim.	Arracan.	
1. European and their descendants ..	1,252	1,146	161	2,562
2. Burmese including Arracanese and Talaiings ..	886,264	211,594	301,829	1,399,167
3. Karens	184,006	100,356	62	284,426
4. Shans and Tounghoos ..	24,892	18,144	3,892	46,928
5. Chinese	2,001	8,118	135	10,254
6. Khyengs	16,647	...	20,183	36,930
7. Indians	17,007	28,781	26,841	78,479
8. Mahomedans of Burmah ... ..	...	...	19,343	19,343
9. All races not included in the above ..	17,220	3,311	4,357	24,888
Total ...	1,150,189	371,402	376,806	1,897,897

In addition to the Karens herein entered there are mountaineers of that race in the district of Toungoo numbering 62,326 souls.

Numbers of both sexes. 145. The numbers of both sexes were as follows :—

Men	...	...	...	...	574,178
Women	...	...	...	...	552,666
Boys	...	...	...	...	404,733
Girls	...	...	...	...	366,320

Total ... 1,897,897

These returns do not include the population within the Military Cantonments.

SECTION XVI.

AGRICULTURE.

146. The experimental cultivation of cotton has been continued by Dr. Brandis. The seed used was of two kinds, New Orleans and Sea Island, both raised in Pegu. The first yielded 120lbs. of cleaned cotton per acre; the second being longer in arriving at maturity was withered by the heat of the early summer sun, and produced very little. The New Orleans variety appears well suited to the climate, but to induce Burmese peasants to cultivate it is an object rather to be hoped for than expected.

Variety of Tobacco from Bengal. 147. The Rungpore variety of tobacco has been successfully introduced into Pegu.

Tea plantation. 148. A tea plantation has been commenced in the District of Akyab by Mr. A. L. McMillan. The quantity of land under cultivation is not stated.

SECTION XVII.

FORESTS.

149. The forest regions of British Burma, brought under regular administration, lie in the Divisions of Pegu and Tenasserim. For teak timber, though known in Arracan, is not in sufficient quantity to be worth preserving. The teak forests of Pegu and Tenasserim are arranged in three grand divisions, marked out by the courses of the main rivers and their tributaries. Each grand division is placed under the control of a Deputy Superintendent, and is sub-divided into sections, which form convenient groups for working and watching the tracts where the trees grow.

150. During the year 1861-62 the principal feature of administration has been the further development of the plan of working the forests by means of private enterprise, instead of by direct Government agency. But the results of that plan are not yet apparent.

151. In the Salween or Tenasserim Division the plan does not appear to have been so successful as was hoped, from the results of the system in the previous year. In 1860 not less than 11,714 logs were brought down by the permit-holders; but in the past year only 2,105. It is considered this resulted from the discontent of the Karen inhabitants of the Shoay Gyeen forests, who had been superseded as permit-holders, and would give no assistance to those who succeeded them. It is understood, however, that they have since worked willingly.

152. Permits were issued in the Sittang Division last year, and the plan has worked well in 1861-62. The holders brought down 6,748 logs.

153. In the Irrawaddy Division the timber brought down by the permit-holders, was not much, but arrangements for future years were made as follows:—All forests except those of the Tharawaddy section, and a portion of the southern section, which were reserved to be worked by Government, were made over to permit-holders. The terms for the southern forests were competition by tender for the amount to be paid on account of permit fee, and a payment of ten Rupees for each log of full size brought out; a proportional payment being made for under-sized logs. The permit-holder only to fell trees killed and marked by the Forest Department, and the permit to hold good for three years. The Eastern Promé forests were disposed of in like manner, but for a term of six years. The forests west of the Irrawaddy were dealt with on a different principle; they are poor, and would not bear the expense necessary to preserve them. They were, therefore, offered on a lease for twelve years, the lessee to girdle for himself, and to pay, on the timber he brought out, the amount he had tendered to give for his annual lease. The price to be paid for each full sized log was seven Rupees, and three and a half for each under-sized. Tenders were not made for all groups of the western section, but such as were made were accepted, and the remaining groups have been allotted for shorter terms.

154. The amount derived by permit fees during the year has been—

	Rupees.				
Salween Division	22,835
Sittang Division	14,030
Irrawaddy Division...	24,600
Total ...					61,465

155. Considerable progress has been made during the year in opening out

Works for improving communication with the forests. streams by blasting rocks, which obstructed the channels.

In the upper part of the Pegu River a succession of rocks, extending for ten miles, was thus removed. This work has been carried on not only at spots near to each other, but at places hundreds of miles apart,—a circumstance to be remembered when estimating the difficulties to be overcome, and the value of the work accomplished. Numerous streams have also been cleared of jungle and drift timber which obstructed them. Similar work has been carried on by one of the permit-holders, Mr. W. Wallace. Thus some hundreds of square miles of forest, hitherto sealed up by nature, have been opened to the axe of the forester.

156. The young trees in the forest have been preserved and protected as far as

Various operations in the Forest Department. possible. The teak plantation at Prome is reported to have progressed favorably. The number of trees girdled during

the year in the three divisions has been 21,201. Useful timber of other kinds than teak, to the amount of 65½ tons, has been brought down. A collection of such timber has been made and catalogued, and experiments to test their strength have been commenced.

Number of logs yielded. 157. The total yield of teak timber by the forests during the year has been as follows:—

Number of Logs.

By Contractors and the Forest Department	...	20,436
By Permit-holders	... ..	9,236
		<hr/>
Total	...	29,672

The whole of the above mentioned logs have been delivered at the timber depôts.

158. Not less than 96,366 logs of teak were brought from foreign States down

Number of logs brought from beyond the British Frontier. the Salween River. Down the Irrawaddy and Sittang Rivers 9,879 logs were brought.

Financial result. 159. The last point to be noticed is the financial result of the year; the expenditure has been—

				Rupees.
Works	...	...	...	1,86,614
Maintenance	...	...	...	52,778
Establishment	...	...	...	82,942
Total	...	...	...	3,22,334

This sum is the *bond fide* forest expenditure. In the Timber Revenue Department at Moulmein Rupees 13,000 were expended in establishments, which, added to the above sum, = Rupees 3,35,334, as shown in Statement K. The amount actually realised during the year by sale of timber permit fees and various items was Rupees 3,96,885, thus showing a profit of Rupees 74,000. But a good deal of this expense has been incurred on account of timber not yet brought into account, and the Department has now on hand fifty-four elephants, of which twelve were purchased during the year. To the above sum, realised on account of the forests, has been added the sum of Rupees 2,87,412 collected on account of timber revenue at Moulmein, and the total will be Rupees 6,81,497, as shown in Statement J.

The total quantity of timber sold by the Department during the year amounted to 14,912 logs, the prices realised were on the average about one-third less than for similar timber in the previous year. Thus from the state of the timber market no adequate increase has accrued to the income of the Department, though the quantity of timber sold has been augmented eighty per cent.

160. The energy, skill and excellent administration of the Superintendent, Dr. Brandis, have been conspicuous during the year. He reports favorably of the management of his Deputies, Mr. H. Leeds and Lieutenant W. J. Seaton, and also of Mr. W. C. Graham, in charge of a section of the Prome forests.

SECTION XVIII.

TOPOGRAPHICAL SURVEY.

PEGU.

161. The operations of the year commenced with mapping out the results of past surveys, and, as this progressed, Surveyors were despatched to make good gaps and deficiencies that appeared in the process of plotting. Later in the season the Superintendent was engaged in surveying a portion of the Yoma or central range of hills for about fifty miles to the north of Rangoon, and afterwards in surveying the lower portion of the chain of the Arracan hills forming part of the Bassein district, and lying between the 16 and 17½ degrees of north latitude.

162. The field work done during the year comprised 87 miles of traverse, 37 of river triangulation, 185 of river survey, 407 of detached linear survey, and an area of about 4,000 square miles.

163. The two maps compiled in the previous year formed two sheets of a series of six into which it was proposed to divide the Province; but these sheets were found to require re-construction. In re-casting them they have been re-projected as two sheets of a series of four into

which it is now proposed to divide the Province. Of these one sheet is intended to be published in July; and the second will, it is hoped, be published in December next.

164. The establishment during the year consisted, besides the Superintendent, of 10 Native Surveyors, one Artificer and one Writer. The cost was Rupees 17,726 during the year exclusive of the Military pay of the Superintendent, giving for the year an average of Rupees 4-6-0 per square mile.

Completion.

165. It is stated by the Superintendent that he anticipates being able to complete the survey by the 1st May 1861.

TENASSERIM.

166. In the Tenasserim Division the only survey in progress has been a partial one in the Amherst District. It is carried on by townships. It has been more or less in progress since 1857, and about 1,000 square miles have been surveyed. The establishment has also been employed on a variety of miscellaneous work, such as surveying forest grants, &c. The monthly cost is only 650 Rupees at a maximum, and 508 Rupees monthly during the recess.

ARRACAN.

167. In the Arracan Division no survey operations have been carried on during the past year, the establishment having been withdrawn to the Chittagong District. In Arracan the District of Akyab has had its survey completed, and those of Ramree and Sandoway remain to be surveyed.

SECTION XIX.

VACCINATION.

168. Dr. Graham, the Deputy Inspector General of Hospitals, reports that during the past year vaccination has been more extensively practised and with greater success in Pegu than heretofore. The following is the Table of the results:—

STATIONS.	Europeans including East Indians.	Natives of India.	Natives of Burmah.	Successfully.	Unsuccessfully.	Unknown — failed to attend again.	Gross total vaccinated.
Moulmein	57	165	94	271	45	...	316
Shaw Gyee	13	52	81	96	...	...	96
Toungoo	41	25	1,126	1,027	5	264	1,296
Thayetmyo	30	7	123	154	8	...	162
Rangoon	70	7	23	82	2	16	100
Total	214	257	1,499	1,630	60	280	1,970

No cases at Henzadah or Prome were successful. It is noticed by nearly every Medical Officer that the Burmese do not place much reliance on vaccination as a protection against small-pox. Inoculation is extensively practised by Burmese medicine men.

SECTION XX.

HOSPITALS AND DISPENSARIES.

169. In Pegu two dispensaries are maintained partly by public subscriptions and partly by Government. One of them is at Rangoon, and one at Thayetmyo. The former institution was not in a satisfactory state last year. It has, however, considerably improved in 1861-62. The number of patients has very much increased, and the expenses which were far too high have been much reduced; 1,118 out-patients, and 230 in-door, were treated during the year. The institution is now in a satisfactory state.

170. At the Thayetmyo Dispensary 690 out-door and 70 in-door patients were treated. The funds of this institution are small, but they are turned to the best account.

171. The Moulmein General Hospital is an institution well maintained and well administered. It is chiefly useful as a hospital for the treatment of European seamen, but it also receives Natives, and large numbers of out-door patients are relieved. The funds are derived partly from Government and partly from the paying patients, and partly from public donations, but the last mentioned are not extensive.

172. During the past year 382 Europeans and 766 Asiatics were admitted into and treated in the hospital. At the same time not less than 5,914 out-door patients were treated. The Commissioner observes in his Report:—"This very useful institution has fully sustained its character during the past year under the very able and zealous management of the Civil Surgeon Dr. Marr. He reports most favorably of the Assistant Apothecary Mr. d'Roza."

173. The hospitals and dispensaries maintained in Arracan are a General and Seamen's Hospital at Akyab, and charitable dispensaries in connection with the usual Civil Hospitals. The Seamen's Hospital at Akyab is supported by a monthly donation from Government of Rupees 327, and an allowance from the Port Fund of Rupees 120; the patients also pay. The hospital does not appear to be of that degree of use to seamen resorting to Akyab, which the amount of expenditure would lead us to expect. During the past year only thirty-seven patients were admitted.

174. At the dispensary of Akyab 276 in-door patients were treated, and 1,980 out-door. At Kyouk Phyoo 239 in-door and 299 out-door. There is nominally a dispensary at Sandoway; but being within the Jail inclosure, few patients resort thereto.

Dispensaries.

SECTION XXI.

• MISCELLANEOUS.

175. The Geological Survey proceeded during 1861-62 under the direction of Mr. W. F. Blanford. The portion of country examined was that portion of the district of Bassein which lies between the Bassein River and the mountains of Arracan. The rocks are described as "beds of sandstone, shale, and occasionally of limestone belonging to the nummulitic series." Limestone was found at several localities; the most important lie to the south of the Town of Bassein, and of these the richest are near the village of Thamandewa. The rock is described as "inexhaustible, the quality good, and access thereto easy." No traces of petroleum were met with. Strings of lignite of small thickness and trifling extent occasionally occur. "The coal supposed by some to exist in the neighbourhood of Dalhousie is only an instance of these deposits."

Geological Survey.

176. The Cantonment Garden at Rangoon continues under the direction of the Assistant Commissary General Major Harris, to fulfil the objects for which it was established by the Most Noble the Marquis of Dalhousie, and to extend its usefulness.

Rangoon Cantonment Garden.

177. During the past year one hundred and fifty Soldiers of the 65th Light Infantry worked at plots within the portion of the ground allotted to a kitchen garden. They raised during the season—very short in the latitude of Rangoon—not less than 11,000lbs of vegetables. These are partly purchased by the Commissariat and partly sold by the men themselves. The Commanding Officer reserves permission to work in the garden as a reward to the best behaved men.

Work done therein.

178. A bed of aluminiferous shale has been discovered by Dr. Brandis in the Zoonzaleng district of the district of Martaban. It is doubtful, however, whether this will be of practical value.

Aluminiferous shale.

179. A deposit of Galena ore has been discovered in the Tavoy District on a small stream running into the Tenasserim river. The spot is difficult of access, and the Deputy Commissioner Major Stevenson was unable to reach it during the present year on account of the lateness of the season, so that particulars regarding the position of the ore are still wanting.

Galena ore.

180. The local Administration has been deprived during the year by death of the services of Mr. C. M. Crisp, a gentleman for several years resident at Rangoon, and who rendered essential service to General Godwin during the operations which terminated in the capture of the stockaded portion of the Burmese force round the great Pagoda at Rangoon. Since the close of the year also the Chief Commissioner has heard with regret of the murder of Lieutenant C. M. Halked while on duty on the Toungoo frontier by a band of robbers from the Burmese territory.

181. British Burmah was visited during 1861 by the Inspector General of Hospitals, Madras Presidency. His Report will, no doubt, contain his observations on British Burmah generally; but the Chief Commissioner cannot allow this opportunity to pass without recording his grateful thanks for the many useful suggestions received from Dr. D. McPherson on sanitary subjects as regards the Jails, the Hospitals, the Towns, and the general welfare of the inhabitants.

SECTION XXII.

CONCLUSION.

182. The Chief Commissioner desires to return his best thanks to the Officers of the local Administration of British Burmah for their services during the past year. To the Chief Engineer Captain C. D. Newma, Secretary in the Public Works Department, the Chief Commissioner is much indebted for the efficient state of that Department in every respect. To Captain H. Nelson Davies, his Secretary, the Chief Commissioner conveys his best thanks.

The following Officers also the Chief Commissioner desires to bring to notice for the efficient manner in which each has done his duty:—

Commissioners.

Lieutenant-Colonel A. Fyche.

Major T. P. Sparks.

Major G. Verner.

Inspector General of Police.

Captain H. T. Duncan.

Superintendent of Forests.

Dr. D. Brandis.

Deputy Commissioners.

Major S. R. Tickell.
 Major R. D. Ardagh.
 Major J. P. Briggs.
 Lieutenant-Colonel D. Brown.
 Major F. W. Ripley.
 Captain E. J. Spilsbury.
 Captain M. N. S. Lloyd.
 E. O'Riley, Esquire.
 Major J. J. F. Stevenson.
 Captain H. A. Browne.
 F. Shepperd, Esquire.
 Lieutenant W. P. Harrison.
 H. W. Beddy, Esquire.
 Major E. M. Ryan.

Assistant Commissioners.

Captain C. P. Hildebrand.
 Lieutenant A. G. Duff.
 F. J. Fallon, Esquire.
 Captain R. C. Breda.
 Major R. F. Leigh.
 G. Hough, Esquire.
 Lieutenant C. W. Street.
 Captain E. B. Sladen.
 J. Macrae, Esquire.
 Lieutenant W. W. Pemberton.
 Lieutenant C. E. Watson.
 Lieutenant W. C. Plant.

Extra Assistant Commissioners.

G. E. Barr, Esquire.
 C. Phillips, Esquire.
 J. Hind, Esquire.
 DeCourcy Ireland, Esquire.
 Moungh Khaing.
 Moungh Sheve Hlan.

Settlement Officers.

Captain A. R. McMahon.
 J. Treacy, Esquire.
 Lieutenant W. Munro.

Superintendent, Irrawaddy Flotilla.

Captain A. Brooking.

Collectors of Customs.

R. S. Edwards, Esquire.

W. Twemlow, Esquire.

C. P. Brown, Esquire.

D. F. Lonsdale, Esquire.

Master Attendants.

Lieutenant F. W. Aylesbury, I. N.

Captain J. C. Harton.

Captain W. Porter.

Medical Officers.

Dr. G. Marr.

Dr. J. E. Dickinson.

Dr. J. Cowie.

Dr. J. Davis.

Dr. J. Heffernan.

Dr. J. Hook.

Dr. J. M. Donally.

Dr. H. G. Gordon.

The Officers of the Police Force who deserve special notice are—

Captain J. Duval.

Major B. Ford.

J. B. Doyle, Esquire.

Lieutenant C. T. Hill.

Lieutenant J. Lowndes.

Lieutenant J. C. Middleton.

Lieutenant W. G. Grove.

Captain C. Coote.

• Captain S. C. Montgomery.

Lieutenant W. G. Hughes.

Lieutenant C. A. Mackenzie.

Lieutenant F. S. FitzPatrick.

RANGOON ;
The 14th July 1862. }

APPENDICES

TO THE

REPORT

ON THE

ADMINISTRATION OF PROVINCE OF BRITISH BURMAH.

FOR THE YEAR 1861-62.

APPENDIX A.

Statement of the Area, Population, Cultivation and Revenue of British Burmah for 1861-62

1	2	3	4	5	6	7	8	9	10	11	12	13
Division	Area in Square Miles.	Population, number of houses	Number of Townships	Area of Cultivation	Land Revenue	Capitation Tax	Customs including duties, &c.	Fisheries	Agriculture including Opium	Miscellaneous taxes and receipts	Grand Total of Revenue	REMARKS.
Pegu	34,280	1,172,170	66	907,561	13,90,553	11,92,044	15,04,750	4,19,003	4,13,053	9,77,425	56,70,228	
Tenasserim	39,000	371,172	31	301,415	5,25,301	2,20,537	1,36,379	98,575	3,13,293	6,51,987	10,63,583	
Arracan	17,780	370,395	10	100,132	7,44,986	3,20,846	3,30,961		1,33,179	2,40,457	17,09,157	The area of cultivation referred to that for 1860-61, as that for 1861-62 had not been fully ascertained when the Statement was made out.
Total	91,060	1,912,937	107	1,609,108	26,60,840	15,33,527	20,65,991	5,06,578	7,50,115	18,76,179	99,27,648	

APPENDIX B.

Statement of Appeals and Original Suits, regular and miscellaneous, instituted, disposed of, and pending before all the Authorities, European and Native, in British Burmah in the year 1861.

Division	Number of cases pending at the close of 1861			Number of cases instituted during 1861			Number of cases disposed of at the close of 1861			REMARKS.
	Original Suits	Miscellaneous	Total	Appeals	Original Suits	Total	Appeals	Original Suits	Total	
Pegu	54	244	298	528	14,042	2,449	17,619	546	14,066	2,437
Tenasserim	70	253	323	453	5,357	5,443	11,455	596	5,497	5,942
Arracan	46	46	92	177	1,351	9,735	5,143	225	1,241	3,746
Total	170	543	713	1,158	20,850	11,627	34,217	1,367	20,809	11,640
								516	53,731	50
								219	794	

APPENDIX E.

*Abstract Statement showing the Strength and yearly Cost of the Police in the Pegu and Tenasserim Divisions of British Burma,—
1st May 1862.*

Classification of the Constabulary (including Superintendents) in each Division.	Population, No. of Souls.	Area, Square Miles.	STRENGTH OF CONSTABULARY.						Proportion to population, one to	Square Miles.	Yearly cost including clothing, travelling allowance, training, office allowance, &c., contingencies of all kinds		Total cost for each Division
			Inspectors.	Head Constables.	Constables.	Total.	Boatmen.	Congers.			Rupces.	Rupces.	
PEGU													
1 General or Head of Police			15	45	1,024	2,095	160				3,57,001		
2. Guards* over Treasuries and Jails				2	356	378					54,120		
3 Municipal				3	293	325		415	410	13	61,320		5,90,001
4 Village	1,150,180	34,250									40,000		
5 Superintendents and Assistant Superintendents											54,000		
TENASSERIM.													
1 General or Head of Police			12	25	1,666	1,208	50				2,50,000		
2. Guards* over Treasuries and Jails				1	192	208					31,500		
3. Municipal				5	181	196	7	255	152	24	20,000		3,74,072
4. Village	332,542	36,000									30,000		
5 Superintendents and Assistant Superintendents											30,000		
Inspector General											19,300		19,300

* Those furnished to the Military Department are not included. In Pegu the Municipal Police is paid salary from Municipal Funds, in Tenasserim partly so.

NOTE.—This Statement shows the yearly cost of the Police when at full strength throughout the year, except for guards to the Military Department.

APPENDIX F.

Statement of the nature and number of Crimes ascertained to have been committed in the three Divisions of British Burmah during 1860 and 1861.

No	CRIMES.	PROV.		TENASSERIM.		ARRACAN.		TOTAL.		REMARKS.
		1860.	1861.	1860.	1861.	1860.	1861.	1860.	1861.	
FIRST CLASS.										
All Crimes attended with murder or with wounding with intent to murder.										
1	Murder ...	22	22	8	6	4	3	31	31	
2	Gang robbery and dacoity ...	12	8	6	2	12	11	30	21	
3	Highway robbery ...	1	1	1	1	...	...	2	2	
4	Burglary ...	3	...	...	...	...	1	3	1	
5	Theft ...	1	...	...	1	...	1	1	2	
6	Cattle-stealing ...	1	...	1	...	...	...	2	...	
7	Wounding with intent to murder *	5	5	1	1	...	4	6	11	
Total ...		45	36	17	11	16	20	78	67	
SECOND CLASS OF ATROCITY.										
1	Culpable homicide ...	6	11	1	2	10	1	17	28	
2	Gang robbery with wounding ...	36	24	8	5	1	5	45	31	
3	Highway robbery with wounding ...	3	2	2	5	...	1	...	8	
4	Burglary with wounding ..	2	1	...	...	...	...	2	1	
5	Theft with wounding ...	5	5	...	...	2	...	7	6	
6	Cattle-stealing with wounding ..	...	...	1	...	...	...	1	...	
7	Assault with wounding ...	27	29	25	24	32	17	84	109	
8	Arson and incendiarism ..	15	6	2	1	4	1	21	11	
9	Rape ...	41	39	7	6	2	...	50	45	
10	Affray or Riot with violent breach of the peace ..	4	4	1	1	1	...	6	8	
Total ...		139	120	47	49	52	38	238	207	
THIRD CLASS OF ATROCITY.										
1	Gang robbery on land or river ...	129	81	15	10	17	18	161	109	
2	Highway robbery ...	40	19	3	5	3	3	46	27	
3	Burglary ...	99	94	12	15	2	3	113	122	
4	Theft ...	2,018	2,250	480	517	288	222	2,786	3,009	
5	Cattle-stealing ...	168	114	51	65	...	...	221	199	
Total ...		2,454	2,558	561	622	310	246	3,327	3,456	* Area an cattle stealing included in this
FOURTH CLASS OF ATROCITY.										
1	Receiving stolen property ..	56	25	32	26	8	8	96	59	
2	Child-stealing for selling into slavery or other illegal purposes ...	3	...	...	...	...	...	3	...	
3	Counterfeiting coin or uttering base coin ...	6	1	1	...	...	...	7	1	
4	Forgery ...	6	9	4	...	2	4	12	13	
5	Perjury and subornation of perjury ...	30	27	4	3	5	...	39	30	
6	Adultery ...	26	6	...	...	3	...	29	6	
7	Attempts to commit any of the above ...	64	34	27	24	15	14	106	72	
Total ...		191	102	68	53	33	26	292	181	
FIFTH CLASS OF ATROCITY.										
All crimes not specified in the preceding Classes ...										
Grand Total ...		11,688	9,448	3,451	3,105	1,982	2,186	17,124	14,789	

1861-62, omitting fractions.

PORTS BY LAND (RIVER INCLUDED) BEYOND FRONTIER.							
Division.	Articles.	Unit of Weight or Number	Quantity	Value.	Total of Exports and Imports by Land from each Division.	Total of each Division.	Grand Total for the Province.
				Rupees.	Rupees.	Rupees.	Rupees.
Pac.	Cotton, raw	Mauud	43,080	3,28,373			
	Copper	"	60	840			
	Cutch	"	31,224	1,11,700			
	Dyes	"	1,724	11,000			
	Earthen-ware	"		20,584			
	Gold Leaf	Packet	16,470	23,114			
	Gram	Mauud	98,214	1,00,144			
	Hard ware and Cutlery	"		40,544			
	Hides, Bullock and Buffalo	Number	20,700	0,320			
	Horns	"	3,800	420			
	Indigo	Mauud	159	420			
	Jaggery and Molasses	"	160,237	4,48,738			
	Lacquered-ware	"		2,50,190			
	Lead	Mauud	54	1,208			
	Metal-ware	"		25,511			
	Opium, yellow	Mauud	800	0,198			
	Petroleum	"	110,110	1,05,301			
	Piece Goods, Cotton	Piece	300,005	2,55,090			
	" Silk	"	70,055	1,00,240			
	Ponies	Number	408	20,015			
	Sesamum Oil	Mauud	50,831	5,21,000			
	Stick Lac	"	4,058	41,104			
	Stones, precious	"		20,000			
Tavishing.	Sugar	Mauud	108	400			
	Tea, dry	"	247	2,700			
	Tea, wet pickled	"	17,000	1,10,021			
	Timber	Ton	0,404	1,31,800			
	Tobacco	Mauud	30,100	1,08,000			
	Wheat	"	15,000	75,000			
	All other articles not included above	"		5,51,080			
				18,40,730	01,10,340	3,71,54,020	
Assam.							
						1,09,32,845	
						1,62,41,400	
Value of Exports and Imports by Land				91,00,140			
							6,47,20,270

APPENDIX H.

Abstract Statement of the Balance of all Exports and Imports by Sea and Land to and from the Custom Houses of British Borneo during the year 1961-62 ending 30th April 1962.

Division	Name of Port or Custom House.	Value of Exports.	Value of Imports.	Total Value (Customs House).		Amount of duty paid.	Total Value for duty paid.	Total amount of duty paid.	Remarks.
				Rupees.	Rupees.				
Bengal	Rangoon	1,23,57,679	1,41,37,722	2,64,95,401	8,17,744	2,10,44,107	5,98,865		
	Bassien	1,07,908	3,55,279	1,52,727	1,774	9,41,713	6,776		
	Total by Sea								
	Theraponto	47,97,733	33,08,458	81,59,291	9,78,998	75,55,523	5,74,660		
	Louisa	7,000	4,42,211	9,77,867	10,777	1,54,115	13,115		
Total by Land									
	Total Rupees	1,27,88,733	1,84,17,777	3,11,47,236	1,77,744	1,05,63,712	12,23,523		
Madrass	Madrass	7,51,21,000	42,76,184	1,13,19,464	1,22,112	95,0,000	1,09,461		
	Tamir	1,81,121	2,77,777	4,7,333	1,0,777	4,5,129	10,774		
	Mercat	14,861	1,12,777	2,87,777	3,129	3,388	2,770		
	Total by Sea								
	Total Rupees	8,57,861	46,66,145	1,60,25,444	1,77,744	1,08,9,976	1,13,461		
Andamans	Akhab	4,01,101	56,77,455	1,12,12,121	9,77,777	79,17,337	4,30,540		
	Ramree	7,577	5,000	12,000					
	Total by Sea								
	Total Rupees	40,77,777	61,77,777	1,24,12,121	9,77,777	79,17,337	4,30,540		
	Grand Total of (the)	1,55,71,435	3,26,66,145	6,62,25,375	2,77,744	4,99,51,213	17,77,760		

APPENDIX I.

Abstract Statement of Grain (Rice husked and unhusked) and Timber exported from the Province of British Burmah, during the year 1861-62, ending 30th April 1862.

Division.	Port or Customs House and nature of article.	To United Kingdom.		To all other Ports.		Total quantity and Value for Sea and Land export.		Total Quantity.	Total Value.
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.		
PEGUE DIVISION.	By Sea	(Rice husked) 77,993 (Rice unhusked) 35,757	27,14,288 9,00,000	33,543 2,541 2,810 2,883	12,98,212 57,522 84,209 31,704	..	..	1,11,531 2,418 36,967 2,903	40,03,690 59,677 9,74,945 31,703
	Total by Sea	..	..	..	..	1,37,008 3,713	13,55,734 9,57,20	8,210 55,343	3,90,212 10,97,548
	By Land	..	..	..	..	..	..	..	..
	Total by Land	..	..	..	..	..	..	..	..
	Total of Pegu Division	1,11,680 47	34,11,084 1,573	44,406 50,959	14,34,054 11,76,453	1,36,008 60,006	13,74,677 11,78,626	1,36,008 60,006	63,12,677 11,78,626
TANASSERIM DIVISION.	By Sea	(Rice husked) 14,346 (Rice unhusked) 1,164 (Timber) 57,944	6,11,606 3,444 37,00,143	2,743 1,108 4,000 1,712	69,704 1,11,088 23,64,413 74,417	..	..	20,392 8,335 62,270 1,712	6,74,346 11,088 23,64,413 74,417
	Total by Sea	..	..	..	..	..	..	..	..
	By Land	..	..	..	..	..	..	..	..
	Total by Land	..	..	..	..	..	..	..	..
	Total of Tanasserim Division	14,346 1,164 57,944	6,11,606 3,444 37,00,143	2,743 1,108 4,000 1,712	69,704 1,11,088 23,64,413 74,417	20,392 8,335 62,270 1,712	6,74,346 11,088 23,64,413 74,417	20,392 8,335 62,270 1,712	6,74,346 11,088 23,64,413 74,417
ARAKAN DIVISION.	By Sea	(Rice husked) 97,274 (Rice unhusked) .. (Timber) ..	32,10,625	3,408 7,188 40,020	1,49,572 1,12,971 2,76,758	22,354 8,451 97,970	7,61,268 1,16,219 6,06,258	22,354 8,451 97,970	7,61,268 1,16,219 6,06,258
	Total by Sea	..	..	..	..	..	..	..	..
	By Land	..	..	..	..	..	..	..	..
	Total by Land	..	..	..	..	..	..	..	..
	Total of Arakan Division	97,274 ..	32,10,625 ..	3,408 7,188 40,020	1,49,572 1,12,971 2,76,758	22,354 8,451 97,970	7,61,268 1,16,219 6,06,258	22,354 8,451 97,970	7,61,268 1,16,219 6,06,258
Total of British Burmah	By Sea	2,27,510 1,251 57,944	74,00,935 3,325 37,00,143	2,743 1,108 4,000 1,712	69,704 1,11,088 23,64,413 74,417	20,392 8,335 62,270 1,712	6,74,346 11,088 23,64,413 74,417	20,392 8,335 62,270 1,712	6,74,346 11,088 23,64,413 74,417
	Total by Land	..	..	..	..	..	..	..	..

APPENDIX J.

Abstract Statement of the amount demand of Revenue for the year 1861-62, containing fractions.

ITEMS.	DIVISIONS.			Total of British Burmah.	REMARKS.
	Pegu.	Tenasserim.	Arracan.		
	Rupces.	Rupces.	Rupces.	Rupces.	
1 Land ..	13,98,353	6,25,861	7,32,996	26,56,710	
2 Capitation Tax ..	11,92,044	2,70,507	3,29,484	17,93,035	
3 Fisheries ...	4,19,993	86,575	..	5,06,568	
4 Salt ..	41,286	16,861	..	58,147	
5 Forest produce ...	1,564	7,509	15,557	24,570	
6 Excise ..	3,13,663	8,43,263	1,33,180	12,90,106	
7 Sea Customs including fines, confiscations, &c... ..	9,56,981	1,96,370	3,59,961	14,13,312	
8. Inland Customs ..	6,31,769	..	..	6,31,769	
9 Port dues and Marine receipts including Pilotage earnings and Dock-yard cash receipts ..	1,80,158	48,750	56,956	2,85,864	
10. Timber sold—duty on, and miscellaneous proceeds of forest ..	3,67,603	3,16,794	..	6,84,397	
11. Fines and fees on Criminal processes ..	89,479	46,400	11,483	1,47,362	
12 Sale of unclaimed property ..	8,756	1,671	362	10,789	
13. Postage Stamps ..	20,252	11,971	9,270	41,493	
14 Stamps on Civil suits and Law papers ..	1,14,422	99,663	28,506	2,42,591	
15. Income Tax ..	1,41,527	98,819	91,031	3,31,377	
16 Karen Chiefs' tribute ..	8,874	..	..	8,874	
17 Miscellaneous ..	10,604	1,589	83,693	95,886	
Total ...	68,70,228	19,63,933	17,93,487	96,27,648	
<i>Note</i> —During the year 1861-62 land to the amount shown in the annexed Statement was sold in British Burmah ...					
	16,564	3,982	478	21,024	

Statement of Local Taxes for the year 1861-62.

	DIVISIONS.			Total of British Burmah.	REMARKS.
	Pegu.	Tenasserim.	Arracan.		
	Rupces.	Rupces.	Rupces.	Rupces.	
Municipal Fund ..	92,114	17,379	..	1,09,493	
Bazaar Rent ..	41,091	19,528	7,819	68,438	
Produce ..	3,565	8,918	12,859	25,342	
Rent on Town Lots ..	56,978	..	..	56,978	
Talukmah Fund ..	..	..	484	484	
Cattle Pound Fund ..	..	..	4,801	4,801	
Revenue Record Fund ..	..	..	24	24	
Contract Labor Fund ..	..	..	10,769	10,769	
Total ..	1,94,948	59,749	36,251	2,90,948	

Note—In the Administration Report for 1860-61 the amount shown as demand of revenue for Pegu amounted to Rupces 51,52,935, subsequently Rupces 6,720 were added to this amount, which was not known at the time the Administration Report was framed.

APPENDIX K.

Disbursements on account of Salaries of Establishments and Contingencies, and other expenses in the Civil Administration of the Province of British Burmah for 1861-62, omitting fractions.

No.	ITEMS.	DIVISIONS.			Total of British Burmah.	REMARKS.
		Pegu.	Tenasserim.	Arracan.		
	JUDICIAL.	Rupees.	Rupees.	Rupees.	Rupees.	
1	Civil and Criminal Courts and Office Establishment ..	3,11,760	1,34,710	47,409	5,39,279	
2	Police including Village Police and all guards to Civil and Military Departments ..	5,41,800	3,21,423	40,044	9,03,267	
3	Jail Establishment (permanent and temporary) ..	48,630	84,170	17,154	1,49,954	
4	Prisoners' maintenance ..	58,411	108,015	31,101	1,97,527	
5	Contingent expenses ..	32,601	29,461	12,141	74,203	
	REVENUE.					
6	Office Establishments ..	88,048	1,21,505	51,671	2,61,224	
7	Contingent expenses including commission to Theongyees ..	2,51,810	82,192	2,24,001	5,58,003	
8	Income Tax Establishment and Contingencies ..	10,015	7,050	0,000	17,065	
9	Settlement Establishment, &c., and Revenue Survey in Arracan ..	23,938	6,022	17,476	47,436	
	CUSTOMS.					
10	Establishments (Sea Customs) ..	45,425	20,040	7,074	72,539	
11	Contingent expenses ..	37,248	0,000	2,000	39,248	
12	Establishments (Inland Customs) ..	40,514			40,514	
13	Contingent expenses ..	13,015			13,015	
	MARINE.					
14	Port Establishments ..	24,076	31,300		55,376	
15	Contingencies ..	3,014		11,410	14,424	
16	Stores, repairs to Light Vessel, provision, &c. ..	24,611			24,611	
17	Flotilla Pay of Establishment of Superintendent and of Commanders, Officers, Engineers, &c., of Vessels and Steamers for Tenasserim and Arracan ..	60,540	57,407	60,000	1,77,947	
18	River (fresh water) Pilots ..	5,000			5,000	
19	Coal and wood fuel ..	43,215	13,600		56,815	
20	Office contingencies ..	4,002	1,147		5,149	
21	Marine stores, repairs and provisions for Flotilla Vessels ..	21,050	13,871		34,921	
22	Boatyard Pay of Establishments ..	51,871			51,871	
23	Office contingencies ..	5,128			5,128	
24	Shipping Office ..	1,224			1,224	
	GENERAL.					
	Chief Commissioner's Secretary, Court and Office Establishment ..	17,251			17,251	
	Contingent expenses ..	0,000			0,000	
	Topographical Survey ..	17,720			17,720	
	Pegon Light Infantry Battalion and Arracan Local Battalion ..	43,024		1,57,114	2,00,138	
	Forest and Timber Revenue Department's Post Office ..	55,111	20,800		75,911	
	Technical and Educational charges ..	20,078	0,000	0,000	20,078	
	Electric Telegraph ..	5,111	21,000		26,111	
	Charitable Dispensaries ..					
	Total ..	21,00,000	1,08,571	7,10,206	30,04,530	

The disbursements included in the Arracan column are for the year 1861-62, and are not for the year 1860-61, as in the case of the other divisions.

Statement of Disbursements from Funds not debutable to the regular Revenue of the Province during 1861-62.

	DIVISIONS.			Total of British Burmah.
	Pegu.	Tenasserim.	Arracan.	
	Rupees.	Rupees.	Rupees.	Rupees.
Miscellaneous Police Establishment and Contingencies (not included above) ..	71,504	0,000		71,504
Police ..	5,400	2,500	11,054	18,954
Police and Sanitary Fund in Town of Lata ..	2,800			2,800
Total ..	79,704	2,500	11,054	93,258
The following expenses are not debutable to expenditure of British Burmah, and are not included above —				
Cost of stores for other of Her Majesty's Steamers ..		2,100		2,100
Amount of postage of other of Her Majesty's Steamers ..		1,110		1,110
Post Office ..	7,302			7,302



REPORT

ON THE

ADMINISTRATION OF PORT BLAIR,

FOR 1861-62.

REPORT

ON THE

ADMINISTRATION OF PORT BLAIR,

BY THE

SUPERINTENDENT.

FOR 1861-62.

THE year 1861 has not been marked by the material progress of this Settlement to the extent anticipated at the close of last year. The considerable diminution in numbers from 2,202 to 1,836, of whom 145 are females together with the stern retrenchment of expenditure necessitated by the financial views since adopted in India, will account for this; but as regards the former, the loss was not only numerical, but that of a body of men generally the most healthy, robust, and intelligent, who had been trained to a great variety of trades and services during a period of nearly three years, still there has been progress, and, on the whole, it is hoped, a permanent gain.

2. The convict population have behaved quietly. One serious offence alone was committed during the year, the murder of one convict by another; this case has been the subject of a special report, so no more need be said of it here. From the Appendices (1 and 2) it will be observed that the remaining offences were mostly of a trivial nature. Enhancement of sentence has been deemed the most fitting punishment for term convicts convicted of a repetition of their original crime. Only one freeman was convicted of a heinous offence during the year.

3. The number of escaped prisoners during the year* is less than that of last year; the numbers who escaped and did not return in 1859 was 178; in 1859, 158; in 1860, 43; the number this year is only 21. The class of men who take to the jungles continues to be the same, viz., those who in India subsist by plunder rather than labor: The Bengal dacoit, the Bheel or Mahratta dacoit, and the Puthan adventurer of the Deccan—The diminution in the number of escapes this year, notwithstanding that the number of newcomers is greater, would seem to show that experience is beginning to tell. The instances in which any remain at large and alive are probably very very few. Two females deserted with their husbands. In one case both were probably killed, and in the other both returned.

Eighty-nine male life convicts married 89 female life convicts during the year,† making a total of 97; but of these 11 were separated by death. Of the entire number, 12 males support themselves and their wives; 31, though laboring for Government, support their wives; 43, together with their wives, labor for the Government. The cases of complaint against the females have been surprisingly few.

* Appendix 3.

† Appendix 4.

5. The number of convicts self-supporting is 297 against 284 last year. It has been found necessary to restrict the number in order to admit of a sufficiency for the daily service of Government.
- * Appendix 5.

6. The forces of all sorts for the maintenance of tranquillity and order have been greatly reduced during the year without any ill effect. The Naval Brigade has been decreased from 150 to 110 Rank and File. The Subundy Corps has been entirely dispensed with, as also the Vessel-of-War of the Bombay Navy hitherto stationed here. In lieu of the Subundies 50 of the best behaved short-term convicts have been armed, chiefly for the protection of parties working in the jungle, and in lieu of the Man-of-War the Steamer *Lady Canning*, with a small Native crew, has been stationed here.

7. Clearing has not been much extended during the year, for as much land was already cleared as could be cultivated with profit. The manufacture of salt and sugar for local consumption has been permanently introduced. The salt manufacture was intermitted for nine months in order to allow of the consumption of stock in hand, but is now permanently carried on, and the Settlement depends entirely on its own resources for the supply of this article. The manufacture of sugar has been hitherto tentative, but success as to quality having been at last attained, the production will be greatly extended. The Appendix (6)

† Exclusive of that sold by self-supporting convicts. shews that the entire value of Settlement produce other than cattle sold during the year was Rupees 3,765-13-10 against Rupees 1,893-2-10 last year. For neither year is the value of articles consumed for Government purposes (amounting this year to Rupees 460-13-3), nor the stock remaining in store at the end of the year included. In addition to the above, 12 tons of Bullet wood, valued at Rupees 600, have been supplied to the Arsenal, Fort William; 500 tons of coral have been shipped to Calcutta either for the use of the Department Public Works, or to be sold by auction. The value of the whole at the rate at which part was sold by auction would be Rupees 8,000. An agreement was entered into with certain Burmese conceding to them the right to collect cocoanuts on the Cocos Island for one year in consideration of their giving one-fourth of their collections. The monopoly of the edible bird-nests on the Andaman Islands has also been granted to a Chinese for a period of two years for the sum of Rupees 3,200 annually.

8. On Ross Island a Godown two stories high, 150 feet long by 40 broad, with a concrete floor to the lower story, has been completed, as also an Officer's Bungalow raised on posts ten feet off the ground. An Apothecary's house in progress last year at Atalanta Point has been finished. On Chatham Island a spacious workshop, giving cover to the Saw Mill, has been erected, and at Viper Island the Apothecary's house commenced at the close of last year has been completed. Numerous temporary buildings have been erected or repaired, and a large supply of tiles for future use has been made.

9. The boats of the Settlement have been kept in good order. The Gun-boat *Perseverance*, just re-built at the close of last year, has fully answered all the expectations formed of her. She steams as well as scow, and has proved eminently useful for towing boats, and even ships, and visiting the coast. The services of the Store Vessel *Walter Morrice* have been dispensed with in favor of a Commissariat Establishment on shore. This arrangement will, it is hoped, tend to the better preservation of provisions which suffered much in the vessel's hold, and prove in other respects more economical.

10. Appendix (7) shows the number of vessels which entered or left Port Blair during the year; most of these came on the service of the Settlement, and had to be unloaded, ballasted, or coaled.

11. The health of the Settlement may be considered comparatively good. The Appendix (8) shows that among the convicts the mortality is 15 per cent, an increase of one per cent on the rate of last year. The statement as it regards admissions into Hospital cannot be compared with last year; for during the year under report the practice has been introduced of treating convalescents and persons suffering from trivial ailments as out patients, and it is to be regretted that no record of these was kept. The rate of mortality is high, but still lower than that of

• See Ewart's Sanatory Condition of Indian Jails, page 21. fourteen Jails in Bengal* in 1858, the latest year for which the means of comparison are here available. It would appear probable from the Appendix (9) that a good deal of mortality must be attributed to other causes than the effects of climate, the mental depression consequent on a sentence of transportation, coupled with the long journey by land and sea, in many cases, renders the convict a victim to apparently trivial complaints. The Europeans in the Settlement have, for the most part, enjoyed excellent health. There has been no death among them during the year.

12. Copper One-rupee Tokens struck in the Calcutta Mint have been introduced during the year for the payment of the convict subsistence allowance. The advantages of this measure are, that it checks illicit traffic with ships, and does away with the labor of counting a large quantity of copper coin (half pice and pie) twice every month.

13. The period of service of the Naval Brigade having expired, the men were discharged, and fresh hands enlisted on reduced allowances. The conduct of the Brigade has been excellent, and very great credit is due on this account to Lieutenant Holland and his Officers, as also for their zealous co-operation with the Superintendent in all duties connected with the Settlement.

14. The Bishop of Calcutta having arranged that the Chaplain of Moulinein should attend to the spiritual wants of Port Blair, one visit was made during the year. Two Baptisms and two Marriages (one by Registrar) celebrated during the year. The stay of the Chaplain did not admit of his having Divine service. It is to be hoped that some more satisfactory arrangement may be made for the performance of Divine worship and Ordinances of the Church.

15. Intercourse with the aborigines has continued to be of rare occurrence, whenever in the least encouraged they have invariably commenced plundering. In January six aborigines from two different parties were captured in acts of aggression on the Settlement. One of these escaped; of the remaining five two were released, and three were sent to Moulinein in the hope that they might acquire a little English, and, by gaining some familiarity with the habits of civilized men, might prove the means of opening communication with their brethren. During the stay of eight months they acquired nothing. One died of consumption, and the other two were probably only sent back in time to save them from the same fate. They have not returned since their release, though treated with great kindness and loaded with what to them must have been great wealth when dismissed. The only result of their

capture was the acquisition of about one hundred words or phrases of their language by Major Tickell. The whole of the words hitherto acquired have been collected, and the Vocabulary has been submitted to the Governor General in Council.

16. The aborigines did not, during the year, attempt any combined or open attack on the Settlement; though it is believed that a large party, who once made their appearance at Atalanta Point, came for purposes of plunder, and were only deterred by the preparations for resistance which they saw. On the last day of 1860 a convict boatman was wounded by one of the aborigines without any provocation. He died from the effects of the wound. On the 8th October an aborigine, who formed one of a plundering party, is said to have been shot. These are the only casualties within the Settlement, arising from collisions during the year. But run-away convicts, or others met by the Natives in the jungle, have always been plundered of any iron in their possession, often wounded, and no doubt, in many cases, killed.

Statement showing punishments inflicted by the Superintendent of Port Blair during the year 1861.

CRIME.		3 years.	2 years.	1 year.	6 months.	Less than 6 months.	Fined.	Flogged.*	Otherwise punished.	REMARKS.
Theft	...	2	...	1	1	2	1	23	10	* Largest number of stripes inflicted in any one case 80.
Assault	...	...	...	...	...	...	2	6	2
Escape	...	...	...	...	...	...	1	7	14
Attempt to escape	...	...	...	...	...	...	...	1	18
Forgery	...	...	...	...	...	...	...	...	...
Gambling	...	...	..	...	...	...	1	11	2
Breach of discipline	...	...	...	...	...	...	9	9	8
False complaint	...	...	..	...	...	...	...	2	..
Sulking from work	...	...	..	..	...	...	15	1	19
Trespass	...	...	...	...	...	...	1	1	10
Fraud	...	...	...	..	..	...	8	6	3

List of persons sentenced to imprisonment at Port Blair during 1861.

Name.	Condition.	Crime.	Sentence	REMARKS.
Khoda Buksh	Term Convict No. 1722	Theft	Three months' imprisonment from expiry of his original sentence	The prisoner was undergoing five years' imprisonment for armed rebellion. He robbed 68 lbs. of plantain
Moondoy ...	Ditto No. 2772	Having in possession stolen property	Ditto	The prisoner was undergoing seven years' imprisonment for aiding and abetting those making war against the Government. As above.
Fadee Hussein	Ditto No. 4618	Theft	Six months' imprisonment from expiry of his original sentence	The prisoner was undergoing four years' imprisonment for theft committed at Eyrahat. He robbed 14 lbs. of sugar from Commissariat.
Pho Kah ...	Ditto No. 3862	Ditto	Three years' imprisonment from expiry of his original sentence	The prisoner was undergoing sentence of three years' imprisonment for burglary committed at Promé. He entered into a Convict Commissariat Baker's house at night and carried off a box containing Rupees 54.
Ramjan Khan	Ditto No. 3573	Having in possession stolen property	Ditto	The prisoner was undergoing sentence of seven years' imprisonment for theft, and having stolen property knowing to be such,—committed at Azim-gurh. He stole property, value Rupees 40, belonging to the Head Clerk
Abid Ally ...	Lascar of H. M. S. Lady Canning	Lurking in house and trespass at night	One year's imprisonment with hard labor in irons.	Prisoner entered the house of Mr. Green, merchant, at night with intent to rob.

Statement showing increase and decrease of Convicts in the Settlement of Port Blair from 1st January to 31st of December 1861.

Year.	REMAINING FROM YEAR PREVIOUS.		DIED IN HOSPITAL DURING THE YEAR.				DIED OUT OF HOSPITAL DURING THE YEAR.				REMARKS.										
	Received.	Total.	By natural causes.	Suicide.	Accident.	Total.	By natural causes.	Suicide.	Accident.	By Execution.	By Murder.	Total.	Escaped.	Released.	Transferred.	Total.	Grand Total.	Remaining.			
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
From 1st January to 31st December 1861.																					
Male Convicts	2,104	767	2,871	271	...	...	271	5	...	2	...	1	8	279	20	865	16	901	1,180	1,691	
Female ditto	98	64	162	16	...	...	16	...	...	...	...	...	...	16	1	...	...	1	17	145	
Total	2,202	831	3,033	287	...	...	287	5	...	2	...	1	8	295	21	865	16	902	1,197	1,836	

FEMALE.

Date of arrival at Fort Blair.	Register Number.	Crime.	Name of Zillah where imprisoned.	By what Court.	
13th April 1859	458	Accessory in murder	Loodianah	By Judicial Com- missioner, Punjab	18th
17th July 1859	3046	Murder	Ditto	Ditto	25th
2nd April 1858	208	Ditto	Jullundur	.....	16th
22nd April 1859	4095	.....	Jhelum	.....
4th Feb. 1860	3830	.....	Cuttack	Nizamut Adawlut	14th
10th Jan. 1859	1863	Willful murder and theft	Ditto	Ditto	2nd
28th Jan. 1861	4506	Accomplice in murder	West Burdwan	.....	30th
47th July 1859	3059	Murder	Ditto	.....	9th
17th Nov. 1859	3724	Ditto	Dinagapore	.....	20th
14th Feb. 1860	3826	Ditto	Ditto	.....	30th
17th April 1860	3880	...	Patna	.....	13th
8th Oct. 1859	3957	.....	Midnapore	.....
6th Jan. 1860	3708	Accomplice in murder	Ditto	.....	30th
8th Oct. 1859	3653	Willful murder	Cuttack	.....	19th
Ditto	3925	Accomplice in murder	Midnapore	.....	5th
17th Nov. 1859	3709	Murder	Rajshahye	.....	2nd
7th March 1859	2407	Ditto	Ditto	.....	30th
9th Oct. 1859	3076	Ditto	Ditto	.....	18th
15th Feb. 1861	4090	Attempt to murder	Mooredabad	.....
30th July 1859	090	Ditto	Ditto	.....	19th
14th Feb. 1860	3823	Murder	Ditto	Ditto	29th
19th Oct. 1859	1471	Ditto	Sylhet	.....	12th
17th July 1859	3901	Ditto	Burdwan	.....	1st
28th Jan. 1860	3769	Attempt to murder	Ditto	Nizamut Adawlut	19th
19th Oct. 1858	1629	Willful murder	Ditto	Ditto	9th
15th Feb. 1861	4507	Accomplice in the mur- der	Backergunge	Ditto	18th
9th Oct. 1859	3650	Murder	Cuttack	.....	1
16th Feb. 1861	4543	Ditto	Hooghly	.....	21st
11th Oct. 1858	1365	.....	Dinagapore	.....	27th

FEMALE.

Name of Zillah where imprisoned.	By what Court.	Date of marriage at Port Blair.	REMARKS.
Agra	.....	18th June 1861	Both are laboring Convicts.
Beerbhoom	.....	7th October 1861	● Ditto
Chittagong	.....	30th March 1861	Ditto
Ditto	... ..	31st May 1861	Ditto
Ditto	... ..	30th March 1861	The male is a laboring Convict supporting himself and his wife.
Beerbhoom	.....	5th August 1861	Both are Laboring Convicts.
Sylhet	... ..	30th March 1861	Ditto
Furroadpore	.....	Ditto	The male Convict is employed as a Gangman at Rupees 3 per month, and supports himself and his wife.
Mymensing	Nizamut Adawlut	Ditto	Both are Laboring Convicts.
Beerbhoom	Ditto	Ditto	The female is dead.
Agra	Ditto	6th March 1861	The male released is employed as a division Gangman at Rupees 15 per month, supports himself and his wife.
Jaunpore	.....	19th July 1861	Both are laboring Convicts.
Backergunge	Sessions Judge	25th May 1861	The male is a laboring Convict supporting himself and his wife.
Ditto	Ditto	17th July 1861	Both are laboring Convicts.
Hooahly	Ditto	24th Dec. 1861 ●	The male Convict is supporting himself and his wife by selling beetle leaves.
24-Fergunnahs	.....	25th March 1861	The male Convict is employed as a Gangman at Rupees 3 per month, supports himself and his wife.
Ditto	.....	31st July 1861	Both are laboring Convicts.
Patna	.....	10th July 1861	The male is a laboring Convict supports himself and his wife.
Chota Nagpore	.....	9nd July 1861	Both are laboring Convicts.
Goruckpore	.....	14th June 1861	Ditto
Benares	.....	7th March 1861	Both are self-supporting as Dhoby.
Jaunpore	.....	2nd August 1861	Ditto ditto by selling sweetmeats.
Lahore	Judicial Commissioner	30th March 1861	The male is a laboring Convict supports himself and his wife.
Ditto	Ditto	12th April 1861	The male Convict is dead.
Ditto	Ditto	25th May 1861	The female is dead, the male Convict is self-supporting by selling sweetmeats.
Poonah	Sessions Judge	2nd May 1861	Both are laboring Convicts.
Ahmedabad	Ditto	14th June 1861	The female is dead, and the male is a laboring Convict.
Tipperah	Ditto	28th Aug. 1861	Ditto

Date of marriage at Fort Bliss.	REMARKS.
May 1861	Both are laboring Convicts.
April 1861	Ditto.
Ditto	Ditto.
Oct. 1861	Both are self-supporting by breeding fowls.
Dec. 1861	The male is a laboring Convict, supports himself and his wife.
June 1861	Both are laboring Convicts.
June 1861	The male is a laboring Convict, supporting himself and his family.
April 1861	The female Convict is dead, and male is self-supporting.
May 1861	Both are dead.
April 1861	Both are self-supporting by making soap.
May 1861	Both are laboring Convicts.
June 1861	Ditto.
April 1861	The male is a laboring Convict, supports himself and his wife.
Aug. 1861	Ditto
May 1861	The male Convict is a Gangeman at Rupees 5 per month, and the female is a laboring Convict.
Nov. 1861	The male is a laboring Convict, supports himself and his wife.
May 1861	Ditto.
Oct. 1861	Ditto
July 1861	Ditto.
Nov. 1861	The male Convict is a Gangeman at Rupees 5 per mensem, and supports himself and his wife.
Nov. 1861	The male is a laboring Convict, and supports himself and his wife.
Nov. 1861	Ditto.
May 1861	Both are laboring Convicts.
Oct. 1861	Ditto.
Oct. 1861	The male Convict employed as a servant, and supports himself and his wife.
Nov. 1861	The male Convict is employed as a Gangeman at Rupees 5 per month, and supports himself and his wife.
Sept. 1861	Both are self-supporting as fishermen.

FEMALE.

FEM

Name of Zillah where Name of Zillah where imprisoned.	By what Court.	Date of marriage at Fort Blair.	REMARKS.
Agra Lahore	Judicial Commis- sioner	18th July 1861	Both are self-supporting as Gold- smith.
Beerbhoom Ditto	Ditto	10th July 1861	Both are laboring Convicts.
Ditto	Ditto	17th July 1861	The female is dead.
Chittagong .....	.....	6th Aug. 1861	Both are laboring Convicts.
Ditto Ahmednuggur	Nizamut Adawlut	18th Oct. 1861	Both are self-supporting as Dhoby
Ditto Durriabad	Commissioner and Superintendent	22nd Aug. 1861	The male Convict is employed as a Gangaman, and supports himself and his wife.
Beerbhoom	Ditto	13th July 1861	Both are laboring Convicts.
Hylhet Seetapore			
Furroodpo Mooradnuggur	Nizamut Adawlut	20th July 1861	Ditto.
Mymensingh Jaunpore	Session Judge	.....	Married at Jaunpore. Both are laboring Convicts.
Beerbhoom Mysore	Judicial Commis- sioner	.....	Married at Moulmein. The male Convict is a Gangaman at Rupees 5 per mensem, and supports him- self and his wife.
Agra			
Goshearpore	Ditto	10th July 1860	Both were laboring Convicts. On the 18th January 1861 both escap- ed; a portion of the clothes of the female have been found in possession of the aborigines.
Jaunpore			
Bakergung Hanesur	Ditto	16th June 1860	The male Convict is released and gone. He had quarrelled with his wife, and separated from her one year previous.
Ditto			
Hooghly Hissar	Ditto	2nd July 1860	The male is a laboring Convict, and supports himself and his wife.

W4-Pergunn

Ditto

Patna

Chota Nagp

Goruckpore

Banares

Jaunpore

Lahore

Ditto

Ditto

Poonah

Ahmedabad

Tippurah

Port Blair Shipping Return for the year ending 31st December 1861.

ARRIVALS.			DEPARTURES.			REMARKS.
Description.	Number.	Tonnage.	Description.	Number.	Tonnage.	
Ships ...	19	13,600	Steamers ...	19	13,600	
Ships and Barques ...	7	6,780	Ships and Barques ...	8	6,280	
Brigs ...	4	1,150	Brigs ...	4	1,150	
Schooners ...	8	788	Schooners ...	8	788	
Native Craft ...	7	180	Native Craft ...	7	180	
Total	45	21,498	Total	40	21,990	

IMPORTS.				EXPORTS.				REMARKS.
Description.	Number or Weight.	Description.	Number.	Description.	Weight.	Description.	Number.	
Coals ...	Tons. 1,947	Bullocks ...	180	Ballast ...	Tons. 1,450	Convicts ...	892	
Stores in general ...	1,500	Goats ...	438	Coal ...	800			
		Sheep ...	304	Timber ...	15			

Abstract Annual Return of Sick Convicts treated in the Settlement Hospital, Port Blair, from the 1st January to the 31st December 1861.

PORT BLAIR, 1st January 1862.

CLASS OF DISEASES.	MALES.						REM.
	Remained 31st December 1860.	Admitted since.	Total.	Discharged cured.	Died.	Remaining 31st December 1861.	
Fevers	10	672	688	669	18	2	<div> <div> Average daily number of sick for the year { Males ... 113·4 } 129·4 Females ... 16 } Fall of rain during the year ... 156·68 Inches. </div> </div>
Diseases of the Lungs	1	32	33	25	8	...	
Diseases of the Liver ... ..	..	2	2	...	1	1
Diseases of the Stomach and Bowels	31	571	602	415	167	20	
Cholera ... ..	...	15	15	12	3	...
Diseases of the Brain	1	13	14	10	1	3	
Dropsies ... ..	...	11	11	6	2	3
Rheumatic Affections	2	42	44	30	2	6	
Venercal Affections ... ..	...	3	3	3	...	...
Abscesses and Ulcers	14	251	265	235	14	16	
Wounds and Injuries	6	87	93	88	1	4	
Diseases of the Eye	2	23	25	22	2	1	
Diseases of the Skin	1	16	17	17	...	...
Other diseases	33	180	213	147	55	11	
Total	107	1,918	2,025	1,681	274	67	
	FEMALES.						
	Remained 31st December 1860.	Admitted since.	Total.	Discharged cured.	Died.	Remaining 31st December 1861.	
Fevers	15	208	233	210	4	...	
Diseases of the Lungs ... ..	...	6	6	4	2	...
Diseases of the Stomach and Bowels ... ..	...	20	20	14	6	...
Dropsies ... ..	...	2	2	2	...	...
Rheumatic Affections ... ..	...	1	1	1	...	...
Venercal Affections ... ..	...	2	2	2	...	...
Abscesses and Ulcers	1	4	5	5	...	...
Wounds and Injuries ... ..	...	2	2	2	...	...
Diseases of the Eye ... ..	...	5	5	5	...	...
Diseases of the Skin ... ..	...	1	1	1	...	...
Other diseases ... ..	...	15	15	12	2	1
Total	16	266	282	267	14	1	
Grand Total	123	2,184	2,307	1,951	288	68	

NAVAL BRIGADE—1861.

Deaths ... ..	...	...	...	None
Sick admitted ... ..	...	...	...	231
Number of sick sent away ... ..	...	...	...	2
Average sick per cent to strength ... ..	...	...	...	3·9
Percentage of deaths to strength ... ..	...	...	...	—

PORT BLAIR;

The 26th February 1862. }

(Signed)

L. CARTHY,

2nd Apothecary.

Statement showing the number of Male and Female Convicts admitted into the Settlement Hospital during the year 1861,—Average strength and the percentage of admissions to strength.

STATIONS.	NUMBER ADMITTED.			AVERAGE STRENGTH.			PERCENTAGE OF ADMISSIONS TO STRENGTH.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Average of both sexes.
Island	620	2	622	730	18	757	81.19	.97	82.16
Island	788	20	808	600	23	623	125.07	4.62	129.69
Island	132	...	132	278	...	278	48.85	...	48.85
Santa Point	378	214	622	344	91	435	113.07	29.91	142.98
Total	1,918	266	2,184	1,956	132	2,088	...	...	...

(Signed) L. CATHY, 2nd Apothecary,
In Medical Charge.

Percentage of admissions on average strength	...	...	111.3
Percentage of deaths on average strength	...	...	15.0
Total number of cases treated	...	...	23.07
Deaths per cent on number treated	...	...	12.48

Statement showing the Live Stock in the Settlement of Port Blair at the close of the year 1861.

Names.	Government Property.	Property of Servants of Govt. and Convicts.	Total.	REMARKS.
Buffaloes	3	2	5	
Bulls	29	12	41	
Cows and Calves ... ..	...	75	75	
Sheep, Lambs, &c	136	21	157	
Pigs	34	57	91	
Goats	19	220	239	
Pony	1	...	1	
Elephants	2	...	2	

Statement showing the duration of residence at Port Blair of Convicts who died in 1861.

Over two years in Settlement.	Over one year in Settlement.	Over six months in Settlement.	Over three months in Settlement.	Less than three months in Settlement.	Total.	REMARKS.
66	79	54	62	34	295	

REPORT

OF

THE TELEGRAPH DEPARTMENT,

For the Year 1861-62.

In accordance with the arrangement adopted in the last Report the subject matter of the present Report has been distributed under the following general heads:—

- | | | |
|---------------------|--------------------------|------------------------|
| 1. General History. | 4. Messages. | 7. Establishments. |
| 2. Lines. | 5. Instruments. | 8. Finance. |
| 3. Signal Offices. | 6. Stores and Workshops. | 9. General Management. |

SECTION I.

GENERAL HISTORY.

1. In consequence of the dearness of provisions in Pegu, and in view to remove the disadvantage thence arising of service in this serving than addition to the pay of persons of this Department, not natives of Pegu, 25th May 1861, it was recommended to the Government and received its sanction as follows—

2. The scale of the Pegu allowance is

<i>To persons drawing as monthly pay prop</i>	<i>A Pegu allowance of</i>
Rupees.	Rupees.
	30
500	30
400	30
350	25
300	25
250	25
200	20
150	20
120	18
100	18
80	16
60	15
40	14
20	13
10	11
5	10
2	8
1	6

25. The span on the line from Agra to close to the Pontoon bridge, and which, as men from the Punjab to the Bengal Circle, was found to require have entailed an expense greater than was required for the of the Futtebhghar wire a mile lower down the river at the removed accordingly, and the two lines now form a double span feet from bank to bank, without intermediate support.

3. On the effect of this allowance Mr. O'Donnell, the Superintendent of the Pegu Circle, writes as follows:—

“The grant of the Pegu allowance, small as it is, has had a most beneficial effect as it has not only in some measure helped to enable those on low salaries to bear the extra expense of living in Pegu, but it has convinced them that there is every reason to consider their wants, and when possible to reduce their difficulties.”

4. On the 8th June certain suggestions were made by the Civil Finance Commission in view to the better and more economical working of the Department. The correspondence on this subject will be found in Appendix A.

5. On the 12th June the Government referred the question of the efficiency of the Telegraph Department for commercial purposes to the Chambers of Commerce at Calcutta, Bombay and Madras for opinion. The correspondence on this subject is given in Appendix B.

6. Difficulty having been experienced in obtaining Medical aid for the Establishments of the Department residing within Military limits, the Military Surgeons considering that Civil Establishments have no claim on their services, and Civil Surgeons considering themselves above a reference ending on persons in Civil employ residing in Military Cantonments, a reference was made to the Government on the subject. An abstract of the correspondence is given in Appendix C., from which it will be seen that in accordance with the Medical Code, if a Civil Officer resides from necessity in a Military Cantonment, he is entitled to grant him Medical aid from the Civil Surgeon.

7. On the 31st July the sanction of Government was obtained to the free transmission by the Bombay Chamber of Commerce of a commercial message to Mr. Reuter's Agent at Galle, for despatch by that gentleman on commercial message to Mr. Reuter's Agent at Calcutta. Other similar concessions shortly follow viz:—

For the transmission of a free commercial message twice a month by the Calcutta Chamber of Commerce to Mr. Reuter's Agent at Bombay.

For the transmission of a free commercial message weekly between the Chamber at Calcutta and Madras; and

For the transmission of a free commercial message between the Chamber at Bombay and Arrahce.

8. On the 14th August Sir William O'Sullivan, on sick leave, addressed the Government on the subject of the telegraph line near Bombay. Report. A copy Sir William's Report is annexed to the Report of the Local Government.

Table at Port Blair of Convicts who died in 1861.

9. On the 1st August to the Local Government.	Up to three months in Settlement.	Over three months in Settlement.	Less than three months in Settlement.	Total.	REMARKS.
	54	62	34	295	

Telegraph Office every accident to the lines that might be observed by them. The correspondence on this subject are given in Appendix E.

10. On the 10th December a scheme for the revision of the Establishments of the Department received the sanction of Government. Details of this scheme will be found under the head " Establishments."

11. On the 28th December the Government were pleased to appoint me to the Office of Director General of Telegraphs in India which had become vacant by the resignation of Sir William O'Shaughnessy, who had since the 13th of June 1860 been absent on sick leave.

12. On the 21st January 1862 Major P. Stewart was appointed Director of Telegraphs in the Eastern Division. He was immediately on appointment placed at the disposal of the Foreign Department for employment on the proposed line of Telegraph through Persia.

13. On the 8th March priority of transmission was accorded by Government to messages of European public news received by the Overland Mail for the Press over all other private Mail messages, on the understanding that the whole of each such message should be published immediately on its receipt, and that no use should be made of such messages before publication.*

14. On the 25th April Section XI of the Rules of the Department, dated the 21st December 1859, was revised, and the date of delivery of a message to the Department for despatch, which had previously, if given by the sender, been charged for, was added by the Department free of charge. On the same date an alteration in Section XXI of the above Rules was made, and the limit within which complaints or applications for refund would be attended to was extended from two months to three months in the case of messages limited to India and Ceylon, and to six months in the case of messages passing beyond those limits. Refund which by Rule XXI was limited to repetition of messages was at the same time extended to all messages whether paid for at repetition this section. A portion of the correspondence on this subject is given in Appendix G, parallel to the line now working season, when the operations stood previous to and after alteration are given in embankment.

V.

24. The span on the line from Agra to Allahabad, close to the Pontoon bridge, and which, as mentioned in the report of the Commission, was found to require opening to the public, have entailed an expense greater than was required for removal of the Futtehghur wire a mile lower down the river at the place where it was removed accordingly, and the two lines now form a double span of 100 feet from bank to bank, without intermediate support. Messages received direct to and from Allahabad are irrespective of the

SECTION II.

LINES. •

17. The construction of the following Lines was sanctioned during the year :—

Rangoon to Moulmein	...	...	...	166 miles.
Agra to Ajmere	...	...	...	245 „
Coconada to Tallarean	...	...	...	13 „
Chinoor to Sironeha	...	...	...	20 „
Indore to Neemuch	...	...	...	150 „

Total length . 594 miles.

Proposals for the construction of the following Lines are under consideration :—

Jubbulpore to Saugor	...	...	...	109 miles.
Cochin to Tuticorin	...	...	...	205 „
Cannanore to Dharwar	...	...	...	273 „
Dacca to Gowhatti	...	...	...	265 „

Total length... 852 miles.

18. The following line is under construction :—

Meerut to Mussorie, distance 125 miles, of this 64 miles are completed, viz., from Meerut to Roorkee.

19. The construction of the following lines was proposed :—

A line from Indore to Khundwar, distance 74 miles. The object of the proposal was to connect the Government system of Telegraphs with that of the Bombay—Jubbulpore Railway, and thereby obtain a more direct communication with Jubbulpore than at present, as well as an alternative line between Indore and Bombay; but as Indore was already in communication with Jubbulpore through Agra, as well as through Hyderabad, and as a second line was not required for the business between Indore and Bombay, the proposal was not acceded to.

20. A proposal was submitted by Lieutenant Glasford, Deputy Commissioner, Godavery Districts, for the transfer of the existing line between Mohadapore and Chandry to the route originally intended for it along the left bank of the Godavery, a route which was abandoned in 1858 owing to the disturbances then prevailing in the district. It was considered by the proposer that as the brick pillars which had been erected along 39 miles of the route were of such a nature that they would otherwise have been necessary wires, and there was no ground for the supposition that the wooden-posts would have proved Bombay, ...

21. One object of the Bill is to secure the security of the Telegraph lines. It is proposed that the lines should be more lighted, and that the Government should be empowered to take possession of the lines in case of an outbreak, where the local Government rule.

Table showing the number of months in Settlement of Convicts who died in 1861.				
Under three months.	Over three months in Settlement.	Less than three months in Settlement.	Total.	REMARKS.
64	62	34	295	

22. The change would have involved the stoppage of all communications through the Central India Lines during the entire of the period necessary for the transfer, probably about two months; on these grounds, as also on the large expense the transfer would have occasioned, the proposal was negatived by the Government.

23. No new lines having been completed during the year, the mileage remains 11,030 as in last Report, of which 10,731 miles have a single wire, 225 miles a double wire, 2 miles a treble wire, and 15 miles a quadruple wire, giving an aggregate of 11,148 mi^l of line wire.

Punjab Circle

24. Inconvenience was felt from the circumstance that the spans across the Rivers Jumna and Ganges, in the immediate neighbourhood of the Agra and Futtchghur Offices of the Bengal Circle, did not belong to that Circle, but to the Punjab;—delays in consequence resulted in repairing breakages. This inconvenience was remedied by the removal of the boundary between the two Circles from the outer walls of the Offices mentioned to the opposite banks of their respective rivers.

25. During March and April several interruptions were occasioned by the wilful cutting of the line between Agra and Delhi at a point where it runs at a considerable distance from the main road, the object of the cutting being to obtain possession of the zinc ingot joints by which the several lengths of wire are connected, and which on this section are very numerous. The culprit was apprehended and sentenced to two years' imprisonment. This portion of the line will be removed to the main road on the first favorable opportunity.

26. *Loodianah to Phillour.*—The cable across the Sutley at Phillour having in July been broken by the strength of the current was replaced by a second cable which has also failed. Communication at present is kept up by an air line supported on the masts of boats.

27. *Lahore to Multan.*—Communication has been frequently interrupted on this section owing to the unusual height of the river, which runs for many miles parallel to the line and road. The line is very unsafe, and must be reconstructed next working season, when the opportunity will be taken to remove it to the Railway embankment.

28. The span on the line from Agra to Allyghur, which crosses the Jumna at Agra close to the Pontoon bridge, and which, as mentioned in paragraph 21, was transferred from the Punjab to the Bengal Circle, was found to require considerable repair, which would have entailed an expense greater than was required for removing the line to the crossing of the Futtchghur wire a mile lower down the river at the Taj Mahal. The span was removed accordingly, and the two lines now form a double span of No. 3 wire 1,250 feet from bank to bank, without intermediate support.

Bengal Circle.

29. The span across the Ganges at Futteghur then three miles in breadth during the rains, and which had also been transferred from the Punjab to the Bengal Circle, as mentioned in paragraph 24, is supported on six masts fixed in mill-stones which were planted in the bed of the river during the dry season. To these masts are attached stays of No. 1 iron wire fixed to blocks of stone. The arrangement is, however, very unsatisfactory, the line being constantly injured by boats; and it will be necessary either to lay a cable here, or to build masonry piers for the support of the masts.

30. *Futteghur to Cawnpore, and Cawnpore to Allahabad.*—These sections have been repaired, but will have to be reconstructed during the next working season. For this Hamilton's Standards have been provided.

31. *Allahabad to Benares.*—Owing to defective insulation the second wire on this section, which was added during the year, could not be brought into use. The two cables crossing the Ganges at Allahabad and forming a portion of this line are in good order. The line is supported on Hamilton's half Standards, and will be furnished with Sir William O'Shaughnessy's pattern of insulator.

32. *Benares to Dehree*—This section has given much trouble from constantly recurring imperfect communication, the cause for which cannot at present be assigned, but is probably some defect in the earth plates. The line has been thoroughly repaired and has no apparent defect. The Offices have changed hands more than once, and both these and the lines have been examined both by the Superintendent in charge of the Circle and his Assistant; unaccountable interruptions varied by imperfect communications occur in fine as well as in wet weather, and during all periods of the 24 hours. The line is on Hamilton's half Standards.

33. *Dehree to Barhee, and Barhee to Rancegunge.*—The posts on these sections were erected in 1854, and are now only kept standing by high mounds of earth round each. They will have to be removed next working season by Hamilton's Standards, which have been provided for the purpose.

34. *Benares to Patna.*—This section must be reconstructed next season. The cable crossing the Soane failed in October. Bank Offices were kept open for one month, when on the falling of the river the cable was repaired, and has since continued to work well.

35. *Patna to Monghyr.*—This section is in a very bad state, its reconstruction will be necessary next working season, for which Hamilton's Standards have been provided.

36. *Monghyr to Bhaugulpore, Bhaugulpore to Rajmehal, and Rajmehal to Burdwan.*—Hamilton's Standards are in course of erection throughout this section. Materials were distributed in September and October; but owing to the refusal of the East Indian Railway Company to admit the right of this Department to construct its lines within the Railway Company's fences, four months of the working season were lost, and very large additional expenses incurred. The correspondence on this point is given in Appendix II.

37. *Rancegunge to Mitnapore.*—This line was hastily constructed in 1860 with bamboos and saul saplings, and several miles were blown down in April 1861. Its permanent construction with Hamilton's posts was commenced in January, and the work is still in progress.

38. *Hooghly River Lines.*—These lines have worked very successfully; an interruption being of rare occurrence. A new cable was laid across the Hooghly at Kookrahatty by Dr. Swaine (the Inspector in charge of this Division) at the small cost for the operation of Rupees 30. A portion of the old cable, which was recovered and joined to a piece of new cable, was also successfully laid by Dr. Swaine across Channel Creek to replace the cable which had failed there.

Pegu Circle.

39. The following sections of line in this Circle have been reconstructed with 1st class Iron Wood Standards:—

Prome to Thyetmyoo	...	...	45 miles.
Part of the line Henzadah to Rangoon	...	...	25 „
Rangoon to Pegu	...	...	52 „
Myoung Kedouk to Kyouktaga (part of the line connecting Prome with Padeng)	...	...	76 „
			—
Total			198 miles.

40. During the year the needle instruments in use in this Circle have been replaced by Morse instruments with very great benefit to the working of the lines.

41. The opening of the line to Calcutta has had a most beneficial effect on the collections of the Circle, as will be hereafter shewn.

42. Accidents to cables from lightning have been very numerous,—not one having escaped.

Indore Circle.

43. No construction or important repairs have taken place in this Circle, and nothing of interest has occurred in the working of the lines.

East Coast Circle.

44. *Bezwara to Dowlaishwaram*.—Sixty-five miles of this section is on Hamilton's Standards, the remaining 28 miles have been lately repaired, but must be reconstructed with Hamilton's Standards next working season.

45. *Dowlaishwaram to Vizagapatam*.—The crossing at the Godavery, four miles wide, composed jointly of air lines and cables, has given much trouble owing to imperfect construction, but is being thoroughly secured.

46. *Chicacole to Berhampore*.—Hamilton's Standards have been erected throughout this section (96 miles); but the line cannot be completed until the receipt of the wooden tops necessary with these standards, and which were not received with them from England.

47. *Khoordah to Cuttack*.—The air lines crossing the "Rishukooke," "Cooki" and "Kudjuree" Rivers, the two former 1,200 feet broad, are being strengthened.

48. *Cuttack to Ballasore*.—This section has given great trouble owing to the decayed state of the posts. It is under permanent reconstruction with Hamilton's half Standards.

49. *Dowlaishwaram to Coconada*.—This section of 32 miles is in a bad state, and must be reconstructed next working season.

50. *Jellalore to Kerdgere*.—This line is under reconstruction with Hamilton's half Standards.

51. The cash collections in this Circle, as will be elsewhere seen, have increased 10 per cent. over those of last year; the increase being chiefly from the short branch lines communicating with the trading Ports of Calingapatam, Baniapatam and Coconada.

Madras Circle.

52. Between Madras and Pondicherry the line where at any great distance from the main road has been brought nearer to it in view to afford less facility for the perpetration of frauds similar to those referred to in paragraph 9 of the last Annual Report as having occurred near Bombay.

53. As was the case last year, several of the masonry pillars on the line to Bombay *via* Nellore, Bangalore and Bellary, and between Bangalore and Mysore, have fallen, and have been replaced by timber supports; these will again be replaced by Hamilton's Standards as soon as they can be conveyed from Madras, where a sufficient number are in store to render permanent all the lines in the Circle.

54. *Cochin to Calicut*.—Communication on this Section has been improved by the removal of decayed posts, and by replacing three cables by a like number of air lines.

55. A slight alteration in the direction of the line is proposed by taking it further inland, where the creeks are narrower, and can be spanned by air lines, an arrangement which will admit of two of the remaining cables being dispensed with.

Dacca Circle.

56. In July the southern boundary of this Circle was removed from Akyab to Padeng, making the total length of lines in the Circle 640 miles. No reconstruction or extensive repairs have taken place during the year.

57. *Ramoo to Akyab*.—This Section has always given much trouble owing to the numerous river crossings which occur on it. The defects in the Naaf cable led to the commencement of an air line, by which the necessity of a cable crossing would have been avoided, but which was subsequently abandoned, it having been found possible to repair the cable which is now working.

58. The cable across the "Pudda" failed in August. In December, when the river had fallen, it was found that an Island had been thrown up near the left bank of the river. On this a line was constructed, supported on bamboo tripods and connected with the left bank by an air line suspended in the centre of the river on the mast of a boat anchored in the stream, and with the right bank by a cable. The storms in March blew down the whole of the line on the Island, and broke the flying air line, sinking the boat on which it was supported.

59. The crossing was a second time reconstructed, being supported on ordinary masts, on the Island portion, the line across the river being supported on masts erected on bamboo rafts anchored in the stream. The communication which was thus again restored has not since been interrupted.

60. Cable crossings at the following places in this Circle failed during the year, viz., at the "Ellenkhalley," "Pudda," "Dhullasary," "Kurmapooley," "Naaf" and "Myoo" Rivers, and at Akyab Harbour. The cables at the last three places were of English manufacture and were rendered useless by the corrosion of their iron armour which was much too slight; those at the other crossings were probably injured by lightning, or by the force of the current.

61. Of the above seven crossings five were re-cabled, namely, those at the "Ellenkhalley," "Dhullasary," "Kurmapooley," and "Myoo" Rivers, and that crossing Akyab Harbour. The cable at the Naaf was also repaired, but no cable was available for restoring the Pudda crossing.

The "Dhullasary" and the "Myoo" River cables are again defective though not altogether unserviceable.

Scinde Circle.

62. *Kurrachee to Kotree.*—In consequence of the great distance of the line from the Railway, it has been considered necessary, for the reasons mentioned in paragraph 113 of last Report, to remove it to the Railway embankment. Of this about 30 miles have been completed.

Bombay Circle.

63. There has been no construction in this Circle during the year, the whole of the lines being permanent, with exception to 12½ miles from Cullian to Bulsar, which it is proposed ere rendering permanent to remove to the embankment of the Baroda Railway as soon as its site is marked out. The wooden supports, as they become unserviceable, are being replaced by Hamilton's Standards.

64. Reports from the Central India and South-East Coast Circles not having been received from the Superintendents concerned, the details of their working are not available.

65. It should have been mentioned in last Report that the usual distance between the supports on the lines of this Department has been one-sixteenth of a mile, or 110 yards : but it is very desirable to reduce this number to the utmost possible limit, as the wire is at each support brought into communication more or less imperfectly with the earth.

66. Towards the close of 1860 experiments were by my direction made on the line Allahabad to Benares on the distances possible with supports of the description then generally used, viz., Hamilton's half Standards. Spans of 14, 12, and 10 per mile were tried, and it was found that the latter spacing was practicable with No. 1 wire at a deflexion at centre stated to be about four feet.

General Working of Lines.

67. The following table, prepared from Statements received from the Superintendents of Circles, exhibits the comparative frequency of interruptions throughout the year in the various Circles per 100 miles of length, and the comparative duration of such interruptions as have occurred in each.

68. It will be seen on a reference to the last Report that the frequency and duration of the interruptions has in this year greatly exceeded those of last year. This is chiefly attributable to the unusually wet season, for it will be remembered that the main roads of communication in many parts of India were under water, and in Western India the floods were so extensive as to stop the traffic on the Railway. The wooden supports were also, it must be remembered, one year older.

Return shewing the number of Interruptions and their average and aggregate duration in each Circle for the year 1861-62.

	Bengal.	Punjab.	Bombay.	East Coast.	Central India.	Madras.	Indore.	Scinde.	Dacca.	Pegu.	South-East Coast.
Number of miles comprised in each Circle	1,749	1,563	1,224	1,153	1,275	1,122	735	784	619	538	212
Total number of Interruptions in all parts of the Circle during the year ..	261	260	151½	220	156½	54½	32½	38	67½	61	6
N. B.—Imperfect communication is considered as ½ an Interruption.											
Aggregate duration of the above Interruptions (duration given in hours) ...	8,734½	7,227	2,717½	6,578½	4,412	1,377½	551	1,259	6,070	4,030½	99*
Proportion of the number of Interruptions to the mileage of the Circle (100 miles being taken as the unit of mileage) ...	11.92	16.63	12.37	19.08	12.27	4.85	4.42	4.84	10.90	11.89	2.17
Average duration of each Interruption in hours ..	33	28	18	30	28	25	17	33	90	63	16

69. I regret to find, too late however to make corrections, that the Statement of interruptions received from the Superintendent of the Central India Circle is unreliable.

70. From the Returns prepared by him and abstracted in the above Table, it would appear that, so far as freedom from interruption is concerned, his Circle is on a par with the Bombay Circle, and stood higher than the Punjab and Bengal Circles, and in a position 50 per cent. more advantageous than the East Coast Circle.

71. In reality no one of the Circles mentioned but has been much freer of interruption than that of Central India; and the East Coast Circle which would appear to stand in a position 50 per cent. worse than it, has with the single exception of the branch lines from Kedgerie to Balasore, the interruptions on which did not interfere with the working of the main line, been remarkably free from interruption.

SECTION III.

SIGNAL OFFICES.

72. A new Office has been opened at Sironcha, and Offices have been closed at the two places following, viz: Monghyr and Chinnoor.

* Interruption Reports from the South-East Coast Circle were not available except for three months, and the result of this period only is given here.

73. In Appendix I is given a General List of Offices either open or liable to be opened for correspondence as they stood at the close of the year.

74. The List with other items of information exhibits the monthly cash collections of each Office on the average of the last quarter of the year, and classifies the Offices as "self-supporting" and "unprofitable."

75. This classification is based on the assumption that the increase in collections, consequent on the establishment of an Office, arises jointly from the messages sent to it and from it, the value of the two being assumed equal, and that of the latter being shewn in its cash collections; and consequently that, if the monthly cash collections of an Office amount to *half* its monthly expenses of all natures, the Office is "self-supporting." It is further assumed that the monthly expenses of an Office in full work and employed in day and night transmission, if terminal, that is with one Line only entering it and one instrument only used in it, is Rupees 250. If intermediate, that is with two lines entering it and two instruments used in it, Rupees 480; and if intermediate but at a junction with other lines, then Rupees 120 per line or instrument in excess of two. Classified on this principle, and comparatively with last year, the Offices stand thus:—

				1860-61.		1861-62.	
				Rupees.	Offices.	Rupees.	Offices.
Self-supporting	...	...	...	...	59*	...	39
	Monthly Collections under	...	...	...	...	360	0
	"	"	...	...	...	300	2
	"	"	...	...	...	250	7
	"	"	...	...	...	200	5
Unprofitable	...	...	...	150	5	150	19
	"	"	...	100	28	100	25
	"	"	...	50	16	50	12
	"	"	...	25	27	25	35
Total				...	145	...	144

76. Included with the above are the seven Hooghly River Offices, which are all departmentally unprofitable, the collections for five of them being under Rupees 10 each, and for the other two under Rupees 25.

77. A considerable number of unprofitable Offices are at present required to insure Telegraph communication during the rains in cases where the interval between Offices

* Had the calculation for 1860-61 been based on the more accurate data employed in the present Report, the Offices that were self-supporting in 1860-61 would have been 39 only.

would otherwise be then too considerable for direct work. Insulators of the Brooke pattern were received towards the close of the year, too late however to admit of any opinion being formed of the extent to which they were likely to remove the great drawbacks to which our lines are subject from the absence of insulation.

78. The General List shews that 65 of the Offices are Government property, and that 77 are leased, the rents of these last being shewn.

79. During the year sanction was obtained for the construction of Offices at the following places, viz., Kyouk Phyoo and Padeug, and for nine cable junction houses at the river crossings, in Arracan, at a total cost of Rupees 16,923. An Office was purchased at Akyab for Rupees 4,500.

80. The Office at Monghyr was closed during the year, and an Office opened at Bhagulpore.

81. Proposals for opening Offices at Dinapore and Cuddalore were made, but were not sanctioned. As respects the first of these proposals, it was considered unnecessary to establish a Telegraph Office so near to Patna, where one already existed; and as respects the second, sanction was refused on the ground that the cost of establishing the Office had not been provided for in the Budget Estimate. A proposal for opening an Office at Tellicherry is under consideration.

82. The practice of keeping the Signal Offices open for the receipt and transmission of messages throughout the 24 hours is a source of considerable and unnecessary expense in Establishments, and is opposed to the practice in Europe generally, where the extent of "service," so far as it may be independent of Departmental considerations, is regulated by the importance of the place. The Offices in Europe are classed into those open for both day and night service, those open for full day service only, and those open for limited day service; the first being open throughout the 24 hours, the second between 8 and 21 hours only, and the last between 8 and 12 and 14 and 20 hours. A similar classification might be most usefully adopted on the Indian Lines.

83. *Closure of Offices on Sundays and Holidays.*—The sanction granted by Government to the closure of all Signal Offices between 8 and 16 hours on all Sundays, and on the four principal holidays, which was mentioned in paragraph 68 of last Report was not at first acted on to the full extent, as it was considered advisable in the first instance not to interfere with the transmission of messages actually in Offices or in progress along the lines, but to permit all such to pass as usual. The result of the arrangement was in many cases this, that the transmission of these messages kept the Signallers employed during a considerable portion of the time during which, under the above sanction, they were entitled to relief from work. On the 25th December, therefore, the sanction of Government was acted on in full, and the transmission of messages was suspended during the hours mentioned, with exception to those of public news or Mail messages, or those on urgent public service for the transmission of which without risk of delay the rules laid down in Circular No. 92* were promulgated.

* Vide Appendix N of the Administration Report of the Telegraph Department for 1860-61.

84. The effect of the closure on Sundays, &c., which had scarcely come into full operation, at the termination of last year, may be inferred from the following comparative Statement, showing the number of messages received for transmission into the Calcutta Office during 8 Sundays and 48 week days of the months of February and March; first in 1860 before the change, next in 1861 when the change was in partial operation, and last in 1862 when the change was in full operation:—

1860, Before the change.			1861, When in partial operation.			1862, When in full operation.		
	Serv.	Priv.		Serv.	Priv.		Serv.	Priv.
Number of messages sent on the 8 Sundays of the above period...	32	315	Number of messages sent on the 8 Sundays of the above period ..	22	221	Number of messages sent on the 8 Sundays of the above period ...	4	137
Ditto on the 48 week-days of the above period ...	701	3,610	Ditto on the 48 week-days of the above period ...	702	4,540	Ditto on the 48 week days of the above period ...	701	3,933
Total ...	733	3,925	Total ...	724	4,761	Total ...	705	4,070
	Serv.	Priv.		Serv.	Priv.		Serv.	Priv.
Percentage of Sunday to week day messages ...	4.57	8.73	...	3.13	4.87	...	0.57	3.48

85. The difficulties in the service of the Offices of the Hooghly river lines, owing to their unhealthiness during certain seasons of the year, led to the recommendation of a special allowance to Dr. Swaine, the Inspector in executive charge of those lines, as a remuneration for his professional attendance to the Establishments of those Offices. This allowance at Rupees 50 per mensem was sanctioned on the 23rd October, and the result has been most satisfactory, the sickness among the Signallers at these stations having been much reduced, and the necessity of constant reliefs with their concomitant expense having been avoided.

SECTION IV.

MESSAGES.

86. The total number of messages sent through the lines of the Department throughout the year was, exclusive of those on Departmental service, 2,44,042, of which 35,970 or 14.33 per cent. were on the Government service. The numbers sent from each Circle are shewn in the Table given as Appendix J. The Diagram, Appendix K., exhibits approximately the fluctuations in the numbers of each class of message during the year.

87. The Cash receipts on private messages for the year were Rupees 5,48,582-12-1, being Rupees 42,860-13-11, or 8.47 per cent. in excess of those for the previous year. Those on service messages were Rupees 1,25,811-7-5, being Rupees 6,359-14-0, or 5.32 per cent. in excess of those for the previous year. The receipts of each Circle in each

month of the year for service and private messages, and the increases and decreases as compared with the previous year are given in Appendices L. and M.

88. The opening of the Submarine line Malta to Alexandria, mentioned in paragraph 16, has as yet had no perceptible influence on the receipts of this Department.

89. The percentage of messages, both service and private, sent on Sundays and week-days, has been given in paragraph 81.

90. The number of messages sent on week-days during each hour of the 24 is approximately as follows:—

Time	Hours	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	10 to 11	11 to 12
Number of Messages.	Service	0	0	0	0	1	2	5	8	11	18	27	33
	Private	9	19	0	4	0	17	81	126	120	190	148	103

Time	Hours	12 to 13	13 to 14	14 to 15	15 to 16	16 to 17	17 to 18	18 to 19	19 to 20	20 to 21	21 to 22	22 to 23	23 to 24
Number of Messages.	Service	74	43	46	35	44	28	25	0	7	11	2	0
	Private	213	251	201	200	108	189	130	91	40	64	34	7

91. No arrangement having been previously in force for insuring the *confidential service messages* which pass along the lines from being unnecessarily seen whether in Signal Offices or in the General Complaint Office, to which latter, as mentioned in paragraph 126 of last Report, all copies of messages are forwarded, I directed that all such should be posted in separate covers, and addressed not to the Complaint Office as in the case of ordinary message drafts, but to my own Office, where special arrangements exist for securing their secrecy as well as simple means of registry by which the omission of any Office to forward a confidential service message can be at once detected, provided a copy of it has been received from any other Office. The order on this subject is given in Circular 31, Appendix V.

92. It should have been mentioned in last Report that in February 1861 the Calcutta Chamber of Commerce called my attention to the fact, which had also been animadverted on by the local Press, that copies of old messages were being used in the Bazar for wrapping up groceries. Appendix N. gives the correspondence on this subject, points out the probable means by which these messages found their way into the Bazar, and shews the remedy adopted to prevent a recurrence of such cases. All the old messages that could be found in the Bazar were recovered by the Police, and I am glad to say that the measures taken for insuring their greater security have been most successful, for from the time when this occurrence took place up to the present date the Department has been entirely free from reproaches of the nature brought to notice by the Chamber of Commerce.

93. *Charges on Messages.*—The only change in the manner of charging on messages during the year occurred in April, when the alteration in Section XI of the revised Rules, which has already been alluded to in paragraph 14, was made, whereby the "Office date,"

that is to say the day, hour and minute of receipt of a message into a Telegraph Office, is now in every instance added by the Department and telegraphed free of charge.

94. *Errors in Messages.*—With reference to the numerous mistakes that were constantly made in telegraphing the names of persons and places, Sir William O'Shaughnessy in July 1859 directed that every name, both in the address and body of a message should be repeated back by the receiving Signaller before the message was passed on to the next Office, or sent out to the addressee or issued as public news.

95. The order appearing to have fallen into disuse, it was re-issued in December, and the opportunity was taken to include with the names of persons and places, the repetition of which alone had hitherto been required, all words over whose correct transmission the context afforded no check, such for instance as *vernacular* words or unusual commercial or technical terms. This order is given in Circular No. 130, Appendix V.

96. The rule of refusing refunds in the case of messages on which repetition price had not been paid has been changed, and refunds are now granted in all cases of error to the extent to which the message has by such error been rendered useless to the receiver; but no refund is granted in the case of figures unless the precaution of giving the number in two forms, that is to say the number and its double, has been taken.

97. *Punishment for faults in the transmission of Messages.*—The modes of punishing for faults in the transmission of messages in force at the commencement of the year was by fining the Assistant or Signaller or Signallers to blame in the following proportions:—

1st.—In the case of loss of a message, the full value was recovered from the Assistant in charge.

2nd.—In the case of gross error or such as should have been obvious on perusal by the Assistant in charge, then one-half was recovered from the Assistant in charge, and the remaining half from the two Signallers between whom the error occurred.

3rd.—In the case of the error being of such a nature as not to be obvious on perusal by the Assistant in charge, then the total value of the message was recovered in equal shares from the Signallers concerned.

98. The amount of punishment was consequently measured not by the amount of the fault committed, but by the value of the message in which the fault had occurred. This defect was remedied by fixing certain amounts as the fines to be inflicted for each class of error irrespective of the value of the message. Circular No. 126, in Appendix V gives the details on this subject.

99. *Effect of weather on error.*—The effect which the absence of insulation and the want of a sufficient number of wires has on the amount of error has been mentioned in paragraphs 82 and 83 of last Report.

100. The influence of the weather on the amount of error is shown in the diagram (Appendix O), which exhibits the relation between the percentage of complaints and fall of rain in Calcutta for each month of the year.

101. The comparison would have been more properly made with the fall of rain along the course of the principal lines corrected for the relative Telegraph traffic along each, but the necessary information was not obtainable.

102. *Delay in transmission of Messages.*—The causes of delay in transmission have been detailed in paragraphs 86 to 99 of last Report.

103. In illustration of the delays occasioned by bad weather I may mention that, whereas 12 words per minute or 720 words per hour can be sent in the ordinary course of working during dry fine weather, it frequently happens that but $\frac{1}{4}$ of that number or 180 words per hour can be sent when communication is rendered imperfect by wet weather.

104. *Delay in delivery of Messages.*—The causes of this have been mentioned in paragraphs 127 to 130 of last Report.

105. To reduce the number of undelivered messages, it was on the 24th September ordered by Circular 121 (Appendix V), that in addition to the English list posted outside of Offices a Vernacular list of such messages should also be posted.

106. The number of messages received into the Calcutta Office during the year, which could not be delivered, was 191. The total number of messages received into that Office for delivery was 30,223, hence the percentage of undelivered messages to number received is 0·64.

107. The causes of non-delivery are—incorrect address; error introduced into the address during signalling; absence of indication of residence; the addressee having left the station; or the message being for some reason refused by the person whose address it bears. It was not found possible to exhibit the proportion of non-delivery chargeable to each of these several causes.

108. The inconvenience arising from insufficient addresses would appear to have been of late in France so considerable as to have occasioned a communication from the Director General of the Government Lines of that country to the Presidents of the several Chambers of Commerce, of which the following is a translation:—

(TRANSLATION)

Paris, 20th January 1862.

SIR,—“A tendency which becomes daily more marked has led the public to give incomplete addresses to their Telegraph despatches.

“Many senders, trusting to the notoriety which they attribute to their correspondents, omit all indication of their residence, occasioning thereby serious injury to their own interests as well as embarrassment to the Telegraph Department.

“However well known a person may be, it will rarely be sufficient to insure delivery that his name only is given in the address. Should the name become altered in transmission, or be borne by other persons in the same locality, information respecting

residence is then indispensable. From neglect of this natural precaution a large number of despatches only reach their destination after a long delay, and when they have become useless. Enquiries also often prove fruitless, and it may happen that the despatch intended for one merchant is delivered to a competitor bearing the same name.

"These inconveniences have on various occasions attracted my notice; but they specially claim my attention now that a reduction in the Tariff is causing a considerable increase in the number of despatches, and when it is especially necessary for orderly working to remove all causes of uncertainty and embarrassment. It is also I consider, of importance that the public should know that the administration cannot insure the delivery of despatches unless the residence of the addressee is given by number and street, and that it will have no right to complain if in the absence of this information its despatches do not reach their destination."

109. The original of the preceding letter is given as Appendix P.

110. *Enquiry into Complaints of error, delay or other faults in the transmission of Messages.*—The following Table shows the nature and number of the complaints received during the year :—

NATURE OF COMPLAINTS.	NATURE OF MESSAGES.		
	Service.	Private.	Total.
Error ...	49	164	155
Tardy delivery ...	61	177	238
Mis-delivery ...	2	6	8
Non-delivery ...	75	26	201
Error and tardy delivery ...	4	3	7
Total ...	191	509	702

111. Beside the above, 26 complaints of a trivial nature respecting error in charges, and not connected with the transmission of messages, were also received.

112. The disposal of the above 702 complaints was as follows :—

NATURE OF DISPOSAL.		NATURE OF MESSAGES.		
		Service.	Private.	Total.
Complaints considered justifiable ...	Refunds granted ...	24	226	250
	Entitled to refund, but refund not given, not having been asked for ...	103	55	158
	Not entitled to refund, as when delay complained of was caused by interruption, the message, nevertheless, reaching in less time than would have been occupied by the Post ...	36	131	167
Complaints considered groundless ...	As of non-delivery when the Department holds the addressee's receipt ...	24	63	87
Complaints not enquired into ...	Not having been received within the prescribed limit of two months ...	2	33	35
Total ...		...	...	...

			Rs.	As.	P.
Total amount refunded	1,514	4 0
Amount recovered by fine on the Assistants and Signallers to blame	1,200	13 9
Loss by refunds	334	6 3

113. A reference to last Report will shew that the fines in that year were in excess of the refunds to the extent of 15·53 per cent.

114. The change in the system of fines referred to in paragraph 98 has led this year to the refunds exceeding the fines by 27·62 per cent.

115. No amount of loss could of course justify an unfair system of punishment ; but it is well here to mention that, so far as the finance of the Department is concerned, the amount of fines might be still further reduced without actual loss to the Government, as the recoveries on account of faults and objectionable Departmental messages have aggregated Rupees 428-13-0 during the year. See paragraphs 122 and 126.

116. The percentage of complaints of all natures and of refunds to the total number of messages and total amount of cash collections for this year and the year preceding are as follows :—

	1860-61.	1861-62.
Percentage of complaints to messages sent during the year	.. 0·254	0·257
Percentage of refunds to cash collections of the year	.. 0·275	0·229

117. During the year the limit of two months, within which applications for refund on account of error, delay, &c., must be made, has been extended to three months.

118. In paragraph 103 of last Report the Departmental inconveniences resulting from the Civil mode of reckoning time were mentioned, as well as the change in time reckoning which had been introduced to avoid them. But a further change, viz., the introduction of an arbitrary time, as the Telegraph time for all India was for many purposes felt to be necessary, and for this the time of the Town of Madras was made choice of.

119. The reasons for this choice were that as Madras is as respects longitude about equi-distant between Calcutta and Bombay, the adoption of its time involves the minimum of difference between Telegraph and local times generally, and that as it has a Government Observatory, true time from it can more readily be obtained than from any other station in India.

120. Madras has the additional advantage of being a seat of Government and the Head Quarters of a Departmental Division, and Circle.

121. Circular No. 115 (Appendix V) exhibits one example of the application of a general Telegraph time, and gives a table of the differences between this time and local time for all the Telegraph Stations in India.

122. *Fault Branch.*—This branch was, as stated last year, established for purposes of Departmental discipline alone, and the important part it plays in enforcing this may be inferred from the following Statement of its work during the year:—

Number of messages traced which appeared from the maximum and minimum time interval reports at Calcutta, Madras and Bombay, to have been an excessive time on the line	...	...	...	531
Number of delays in the above which were noticed by fine, warning or reprimand of persons in the Offices where the delays occurred	...	...	...	718
Number of errors in the above which were noticed	...	...	...	33
Number of miscellaneous faults which were noticed	...	...	...	27
Number of neglects or breaches of Departmental Circulars which were noticed	...	...	...	68
Total				1372
Amount of fines inflicted on Assistants and Signallers on account of the above	...	...	...	Rs. 157 12 0
Of which was remitted on satisfactory explanation being afforded, and in consideration of the general good management of the persons fined				20 7 0
Balance in favor of Government...	...	...	...	Rs. 137 5 0

123. *Service Message Examination.*—The object with which this branch was established is explained in paragraph 115 of last Report. The results of its operation during the year and also in contrast with those for such months of the preceding year as the Office was in operation are as follows:—

MONTHS.	NUMBER OF SERVICE MESSAGES 1860-61.			NUMBER OF SERVICE MESSAGES 1861-62.		
	Sent.	Reported objectionable.	Percentage of objectionable.	Sent.	Reported objectionable.	Percentage of objectionable.
May	...	...	...	4,071	45	1.105
June	...	...	...	2,960	25	0.844
July	...	...	...	2,789	25	0.896
August	...	...	...	2,806	31	1.066
September	...	...	...	2,499	21	0.724
October	...	...	...	2,925	17	0.581
November	...	...	...	3,130	25	0.799
December	3,277	60	1.831	2,885	31	1.074
January	3,228	69	2.141	2,926	42	1.435
February	3,039	57	1.875	2,789	36	1.291
March	2,922	80	2.735	3,002	50	1.665
April	3,220	07	2.080	2,688	35	1.302
Total	15,681	333	2.124	35,970	383	1.065

124. The various grounds on which the above messages were considered objectionable are:—

1st.—For being wordy.

2nd.—For not being of such urgency as to call for the use of the Telegraph,—as when the message is not of an urgent nature and the postal time inconsiderable.

3rd.—For not being strictly on the Public Service,—as applications for leave, and replies to such.

4th.—For “precedence” of transmission having been improperly claimed.

5th.—For a “clear line” having been improperly or needlessly claimed.

125. The total of service messages considered objectionable under each of these heads for the year was as follows :—

1st.—Wordy	...	...	10
2nd.—Not urgent	...	...	79
3rd.—Not strictly on the Public Service	...	...	291
4th.—Precedence improperly claimed	...	...	0
5th.—A “clear line” improperly or needlessly claimed	...	...	3

Total ... 383

126. *Departmental Message Examination.*—The circumstances under which it was considered necessary to introduce this check on the messages sent by Officers of the Department on its business are mentioned in paragraphs 117 and 118 of last Report. Materials for preparing a return of the number of such messages examined are not conveniently available for this Report, but the following Statement will give some idea of the operations during the year of this branch of my Office :—

CIRCLE.	No. of Bills.	Value of Bills.			Value of objectionable messages retrenched.		
		Rs.	As.	P.	Rs.	As.	P.
Bengal	213	2,194	1	9	39	0	0
Madras	121	1,500	8	0	8	0	0
Bombay	176	1,175	15	0	15	8	0
East Coast	154	963	6	6	8	10	0
Central India	88	649	8	4	27	12	0
Indore	42	382	14	0	11	1	0
Punjab	102	1,883	3	0	116	10	0
Dacca	48	470	16	0	6	12	0
Pegu*	...	...	...	...	...	...	...
South-East Coast† *	...	...	...	...	...	...	...
Scinde	114	834	7	0	58	8	0
Total	1,037	10,089	14	7	291	8	0

127. This check has not, however, been entirely successful, and I regret to report that the under-hand practice of sending Departmental messages under the name of

* Telegraph service messages are permitted to be sent free in this Circle on the ground that the business is so inconsiderable that the public are not likely to be inconvenienced by the occupation of the lines with Departmental work.

† No Bills received.

"practice" messages without payment has been found to exist in the Bombay and Dacca Circles, and apparently with the knowledge of the Superintendents of those Circles.

128. *Cash Checker's Branch*.—The objects with which this Branch was established are mentioned in paragraph 125 of last Report. The establishment consists of 7 Clerks at an aggregate monthly cost of Rupees 145.

129. In addition to ensuring that the actual amount collected at Offices for the transmission of messages is duly and punctually paid into the various Treasuries, the following sums have been recovered :—

Office.	Amount deficient.	For what month.	When and how recovered.	Explanations given by Assistant in charge.
	Rs. As. P.			
Rewah ...	8 9 0	March 1861	By Treasury receipt 1st August 1861.	Error through clerical inadvertence.
Delhie ...	75 3 0	April 1861	Ditto 5th November 1861.	Forgetfulness (explanation very unsatisfactory, Assistant since dismissed on other grounds).
Kedgerie ...	6 0 0	Sept. 1861	By Postage stamps, 6th February 1862.	Oversight in charging less than the proper rate.
Ditto ...	5 10 0	Dec. 1861	By Treasury receipt, 7th April 1862.	Omitted to charge double on Sunday.
Jubbulpore ...	23 4 0	Ditto	Ditto 12th March 1862.	Error occurred through entrusting a Signaller with the cash account during temporary indisposition of the Assistant.

130. The number of letters of enquiry which it was found necessary to send from this branch during the year was 2,375, or at the rate of 17·21 per Signal Office open to the public, the number of which latter is 138.

131. It having been discovered that in certain Telegraph Offices the Signallers had been in the habit of receiving fees for writing out in English the messages of Native senders, the objectionable practice was prohibited by Circular 137, given in Appendix V.

132. During the year an exception was made to Clause XX of the Rules of the Department, which directs that "the name of the sender must be written on the face of every message," the exception being in favor of messages received from passing ships. Such messages are often sent ashore for transmission without signature, by passengers and others, in ignorance of Departmental Rules. Instructions regarding the special treatment to which such messages are in the interests of the addressee to be subjected, are given in Circular 144, Appendix V.

133. The practice of abbreviating words while signalling, which was very common in Signal Offices, and was a fertile source of mistakes in messages, has also been prohibited; the order on this subject is given in Circular 145, Appendix V.

134. It is, however, most desirable that an authorized Code of abbreviations should be introduced into the Department; the subject shall receive early attention.

SECTION V.

INSTRUMENTS.

135. The number of instruments necessary for the full service of the Department was shewn in paragraph 143 of last Report, to be 446.

136. It was also shewn in paragraph 131 of the same Report that of the two descriptions of instruments in use, viz., the original needle and the Morse instrument, the latter was alone suitable for use on the Indian lines.

137. It was further shewn that the modification of the Morse instrument, devised by Sir W. O'Shaughnessy, had not given satisfaction owing mainly to the inferior workmanship of the Departmental Workshop at Bangalore.

138. Sir W. O'Shaughnessy, to whom during his absence in England I had intimated our wants in instruments, sent out during the year a description of Morse instrument of recent invention; in the recording part of which every objection that had hitherto been felt to the existing plan of tape record was removed.

139. To explain the nature of the improvement I must premise that the record of the original Morse instrument was obtained by embossing on the paper tape certain combinations of the two elementary Morse symbols, the dot and the bar, by which the letters of the alphabet are represented.

140. The printing executed after this method was most prejudicial to the sight, as the trifling differences in level, caused by the presence of the blunt rounded style on the paper tape, were always most difficult to read, and demanded a special light.

141. The method had also this objection, that the force required to form the impressions was such that the feeble current received from the distant Station could not be employed for the purpose, but a fresh current obtained from a strong local battery within the Office, which was brought into action by the weak distant current, had to be made use of, and an additional piece of apparatus termed the relay required for bringing this local battery into action, became indispensable.

142. Added to this there was the objection noted in paragraphs 151 and 152 of last Report, that without great care in the adjustments the important function of automatic transmission might become seriously compromised.

143. Many attempts to remove the chief difficulty, viz., that experienced in reading the embossed symbols, had from time to time been made through the employment of capillary ink tubes and other means of colored writing, but without practical success.

144. A Hungarian, named John, resolved the difficulty in October 1856 in a remarkably simple manner. He replaced the embossing point, which is carried on the end of the writing lever, by a thin metal wheel whose lower edge, during the interval between the markings, dipped into a reservoir of ink, and whose upper edge was, when writing, brought into contact with the under side of the paper tape and revolving with it left an easily legible colored trace.

145. There were those disadvantages, however, in the arrangement, that the writing lever was loaded with an undesirable addition to its weight, whereby its motions were rendered somewhat slower and less easy to excite; and that the writing was on the underside of the paper tape, and imperfections of action could not immediately be detected.

146. In August 1857 Messrs. Digney Brothers of Paris improved on this idea, and in their construction the writing wheel was fixed to the framing of the instrument instead of forming part of the writing lever. Below and nearly in contact with the writing wheel was the turned up claw of the writing lever, and between these but just clear of contact with either ran the paper tape on which the message was to be recorded.

147. Now this arrangement is theoretically and practically perfect, and so far as a legible record is concerned leaves nothing to be desired, and as the force required for slightly deflecting from a straight line, a thin ribbon of paper under no appreciable tension is theoretically almost infinitely small, so in practice it is found that the presence or absence of the tape has no appreciable influence on the force of current required to work the instrument.

148. Thus by this simple change every objection to the existing Morse instrument was at once removed. No difficulty of reading remained, however unfavorable the light, the power required was trifling, and the necessity of a relay, at least on all short circuits, consequently ceased; and as no difficulty existed in the adjustments, so no waste of time was involved in making them, nor compromise to automatic working risked, even when the adjustments were not very skilfully made.

149. These instruments were in 1861, after a two years' trial, introduced into the Offices of the French Government Telegraph, and they were selected by Sir W. O'Shaughnessy as the kind best fitted for the purposes of this Department.

150. During the last quarter of the year 1861, 120 of these instruments were received, of which by far the larger number arrived more or less damaged in transit. Fortunately the damages were rarely of a serious nature, being chiefly limited to the breakage or distortion of the paper tape reel and its support, and these were promptly remedied in the Departmental workshop.

151. It deserves notice that such of the instruments as appeared to have been repacked in London were, as a rule, all received in a damaged state, whereas those that appeared to have been forwarded from London in the original French package arrived uninjured.

152. These instruments were distributed to the various Offices as fast as their repairs could be effected—attention being principally directed to the completion with instruments of the main lines of communication, viz., those from Calcutta through Agra to Bombay, from Bombay to Madras, and from Calcutta through Patna and Benares to Bellary. The Siemens' instruments thereby displaced were brought to Calcutta, and after repair distributed to the Punjab, Dacca and Pegu Circles.

153. The number of Morse instruments of serviceable construction in use and in store, at the beginning and ending of the year, was as follows :—

		1st May 1861.	30th April 1862.
Of Siemens' and Halske's construction	... ..	190	190
Of the Bangalore modification of the above	... ..	8	8
Of my construction	... ..	0	4
Of Digney's construction	... ..	0	80
		<hr/>	<hr/>
Total	... ..	198	282
		<hr/>	<hr/>

154. The very small addition made during the year to the above number by instruments of my pattern, arose from the heavy demands on the workshop for the repair of the instruments of Digney's pattern, which, as stated in paragraph 150 had been received from England in an injured state, as well as from the repairs to the Siemens and Halske's instruments, which a four years' constant use had rendered so requisite, and which the receipt of Digney's instruments had permitted to be withdrawn for that purpose. The opportunity of these repairs was taken for effecting the reduction in size and form and making the alterations in the connections referred in paragraph 134 of the last Report, and paragraphs 155 and 156 below.

155. *Siemens and Halske's Morse Instrument.*—The construction of these instruments is, in every point of view, admirable, their strength being such that they run little risk of injury during transport or from careless treatment in Offices, but their bulk and weight are serious drawbacks, as all repairs of any consequence are necessarily made in Calcutta, and the cost of carriage for this purpose is, in many cases, a heavy item. The change in arrangement, which I introduced into these instruments, and which permits the portion most likely to require repair, viz., that by which the messages are recorded, being removed without detriment to the efficiency of the instrument for working by sound, and which was mentioned in paragraph 134 of last Report, will reduce the inconveniences in question, should the tape record be at any time hereafter had recourse to. Subsequently, by an alteration in the disposition of the various parts, the area covered by this instrument was reduced from 27½ inches by 16½ inches to 18 inches by 15 inches, a reduction which has materially remedied the inconveniences felt from the weight and bulk of the original instrument, and below which it does not appear possible to reduce it, provided the power of record is retained.

156. The instrument had the further disadvantage of working with a different battery current, depending on whether Station or translation (*i. e.*, automatic) work was

in hand. This defect is being remedied as opportunity offers. The nature of the change and the inconveniences it removes are explained in Circular No. 143, Appendix V.

157. The instrument has, however, this great advantage, that its various component parts can be removed and exchanged when out of order, thus in many cases rendering it unnecessary to send any other than the injured portion to Calcutta for repair.

158. *Digney's Morse Instrument.*—With the power of giving an irreproachable ink record of its work without any of the drawbacks that this power had previously entailed, and with the advantages over Siemens' instrument of less weight and bulk, this instrument has several disadvantages. Its workmanship is too delicate for the rough work of our Offices. Its several component parts cannot be removed from the instrument board for repair or exchange, and in consequence, when the clock-work of the recording portion requires cleaning or repair, that portion cannot be removed, so as to leave the instrument the power, as in Siemens', of working as a sounder. Certain of the working portions are also unprotected from dust, and repair will consequently be much more frequently necessary to these than to the like parts in Siemens' instrument, which are protected by a glass case.

159. The construction of the manipulating key of these instruments is not satisfactory, affording neither freedom of action nor durability; and it has been found necessary to exchange those attached to the instruments in the Calcutta Office after only ten months' service.

160. The manipulating keys by which the above are replaced are of my own design, and there is no doubt, from the experience already had, that they will prove both more satisfactory in action, and more durable than any other kind which has hitherto been tried.

161. The relay of Digney's pattern of instrument is much inferior both in the permanence and facility of its adjustments to the same portions in the later specimens of Siemens' pattern of instrument and is constantly requiring readjustment.

162. There is also a great tendency in Digney's relays to become magnetized, from which Siemens' relays of the polarized construction are free, and it is doubtless from changes in the amount of this effect, which increases probably during continuous signalling, and gradually decreases during any cessation of work, that the frequent adjustments mentioned in last paragraph become necessary. Another defect of this relay is the manner in which the current is conducted from the wire of the one coil to that of the other coil; this is not by soldering together the ends of the wires, but by trusting to the contact between the brass bobbins of the coils and the iron-cores on which they fit, a contact of too imperfect a character to be relied on.

163. *My construction of Morse Instrument.*—This instrument possesses every advantage whether of the Siemens' or the Digney's pattern of instrument, without the defects which I have imputed to these. The tape record, which under the present system of working is superfluous, is dispensed with, a change which has permitted of a considerable reduction of cost and size. It is more portable than either of the instruments mentioned, measuring

18 inches in length by 12 inches in breadth, dimensions which in future specimens will be still further reduced by the removal of the key to the operating table, as in the case of Digney's instrument; and by discarding the galvanoscope, which I have superseded by a small needle placed over the relay coils, whereby the resistance to current of these coils, so prejudicial in uninsulated lines, is entirely got rid of. No change has been found necessary in any part of the instrument, whether in its proportions or in the strength of its various parts since it was first designed in 1860.

164. In this instrument the relays are of Siemens' polarized construction, with a trifling modification in form and size suggested by myself, and the arrangement of currents adopted is that referred to in paragraph 156. The manipulating key is of the kind mentioned in paragraph 160, and I have no hesitation in asserting that this combination of instrument is the best that, so far as our existing experience goes, can be used in India, and that it is not surpassed by any combination at present elsewhere in use.

165. A great improvement in instruments of this class would, I think, result from the substitution of permanent for temporary magnets, as has been done in many forms of the relay. Experiments are in hand on this point.

166. As respects the cost of these instruments, the sounding portion, which is alone made in our workshops, costs, with the instrument board and the various connections, manipulating key, &c., Rupees 35. The relay being of Messrs. Siemens and Halske's construction, and which is obtained from that Firm, costs £5-15-6, or, delivered per Peninsular and Oriental Company at Calcutta, Rupees 90, making the total cost of the instrument Rupees 125, which can be reduced to Rupees 105 if the relays are brought out by Screw Steamer round the Cape, as in the case of the Digney instruments. In contrast with this the cost of Siemen's instrument is £36-10-1½, or Rupees 365-3-0, and that of Digney's instrument about Rupees 185, in each case delivered in Calcutta, but an additional expenditure in repair of about 10 Rupees each was incurred on these last ere they could be issued to Officers, see paragraph 150 on this point.

167. I was desirous, if possible, to have these instruments made in England, but the enquiries made of one Firm there have shewn that the cost would be £19 each, which, with freight and charges added, would have brought up the cost to Rupees 220 landed in Calcutta.

168. The cost of my pattern would of course have been much larger had the power of recording its work been retained.

169. *Time Balls*—On the 3rd April the machinery for hoisting the Time Ball in Calcutta ceased to work. On examination it was found that the wooden case in which the piston which guides and moderates the fall of the ball, works, was decayed, and it became necessary to renew the whole of the wood-work connected with it. Opportunity was at the same time taken to refit the discharge apparatus.

170. The repairs, which were commenced on the 3rd April, had not been completed at the close of the year under review.

171. During the 337 days between the 1st May 1861 and the 3rd April 1862 when the ball ceased to be dropped, but one failure occurred, viz., on the 23rd November, when it fell 10 seconds before the proper time, it is presumed, from some carelessness at the Time Ball Tower.

172. At Madras the dropping of the time ball was exhibited on 277 days during the year, and failed on 18 occasions.

173. At Bombay the time ball has been dropped daily, Sundays and holidays excepted, without a single failure.

SECTION VI.

STORES & WORKSHOPS.

Stores.

174. The approximate quantity and value of stores sent from England during the year is given in Appendix C.

175. The proportion of those expended during the year and remaining in store at its termination cannot at present be ascertained in consequence of the absence of Returns from the Southern Division.

176. The chief feature of the year under this head has been the large number of Hamilton's iron Standards and of the Brooke pattern of insulator which have been received from England.

177. The Standards have been extensively brought into use. But it had not been found possible, up to the close of the year, to make any use of the insulators, the caps and brackets necessary for fixing them to the Standards not having been received.

Workshops.

178. At the commencement of the year there were departmental workshops both at Calcutta and Bangalore; but the expenditure at the latter, about Rupees 1,000 a month, being considered excessive, and the out-turn of work insignificant in quantity, and inferior in quality, it was abolished on the 31st October, since which date the Calcutta workshop has sufficed for meeting the demands of the entire Department.

179. No better position than Calcutta could have been chosen for the departmental workshop. At the seat of Government and Head Quarters of the Department it possesses a more perfect and regular system of communication with Europe through the agency of the Peninsular and Oriental Company, of the French Company, and of the Cape line of steamers, and of the numerous first class sailing ships than any other port in India. Through the Local Steam Companies it has also the command of the Coasts of Arracan as far as Rangoon, and of the East Coast of India as far as Madras, besides being able to distribute stores throughout the northern portion of India through the agency of the

various railways and large rivers at very moderate cost, a power which the completion of the various systems of railway will extend to all parts of India.

180. It has further, both in respect of skilled labour and workshop materials, the command of the best supplied market in the world out of Europe or America.

181. The inconveniences under which the workshop has labored, and which were detailed in paragraph 170 of last Report will shortly be removed by the transfer of the Iron Bridge premises to this Department.

182. The work turned out during the year has been—

Made.

Morse Instruments on my pattern	...	...	...	4
Tops of Hamilton's Posts	...	...	...	1,970

Repaired.

Siemens' Morse Instruments	...	...	...	48
Digney's ditto	...	...	...	58
Bangalore pattern	...	...	...	8
Galvanoscopes	...	...	...	115

Besides a large amount of miscellaneous work, which it would serve no useful purpose to detail.

183. In paragraph 171 of last Report, I mentioned the disadvantages we were under from the want of workshop accommodation for the purposes of experiments which are much required on the strength and conductivity of the iron wire we so largely use, and on the conductivity of the copper wire which plays so important a part in our signalling instruments. An example of the inconveniences that may be caused by the use of inferior copper wire has been given in paragraph 156 of last Report, and the importance of attention to the quality of the copper wire made use of will be understood from the fact that the conductivity of the commercial copper wire supplied for the manufacture of the Atlantic cable which was stated by the different manufacturers to be remarkably pure, and to which no mechanical objection could be urged, was found by Professor W. Thomson* to vary with the limits of 100 and 54·9, the conductivity of some other specimens of copper of mechanically good quality having been found to range so low as 34·1.

184. The good conductivity of the iron wire so largely employed in the construction of our lines is of even greater importance than that of the copper wire used in the instruments. No comparative experiments appear to have been any where made on this important subject; nor, considering the greater relative impurity of iron over copper, is there ground for expecting that such large differences in conductivity as have been found to exist in mechanically good copper wire will be found in iron wire; but there can be no doubt that attention to this point will well repay the Department in the

* See London and Edinburgh Philosophical Magazine for June 1858, page 473.

saving of first cost, and of after charges for conveyance, by the selection of wire which affords the required conductivity with the least weight of metal.

185. In this view I included a set of apparatus proper for enquiries on this subject in my Indent on the Home Government dated the 3rd April 1862.

186. The strength of the line wire the Department uses is in no respect less important than its electrical conductivity. The number of supports per mile, that is to say, the number of points in each mile at which the wire is brought into connection more or less imperfect with the earth, and therefore the amount of current loss, and corresponding waste of battery materials and difficulty of signalling, as also the relative freedom from interruption by breakage are all largely dependent on this quality.

187. The heavy expense and disappointment attending the employment of subaqueous cables for river crossings, which in the larger rivers have, as a rule, to be re-placed annually, render it also most desirable to re-place these, as far as may be possible, by air spans; but the strains in such cases are often so extreme as to preclude the use of any but the most tenacious materials, and as the height of the masts employed must be arranged in anticipation for material of a certain assumed tenacity, and as in order to reduce the cost of these expensive constructions the highest known standard of tenacity must be assumed, it is clear of how great importance it is to have the means of testing the material which it is proposed to employ, as well as of checking the quality of the supply sent out.

188. Apparatus for applying the tenacity test will be prepared as soon as the workshop is transferred to the new premises at Alipore.

189. It is desirable that in all future indents for wire the required conductivity should be mentioned, and not the gauge as has hitherto been the custom, and that a minor limit to the tenacity should also be laid down.

190. For the former of these I am scarce prepared to offer any recommendation, as no experiments have, so far as I can learn, been published on this very important subject. But from calculation I would presume that wire of fair commercial quality, such as is generally used on the Government lines in India, *viz.* No. 1, having a diameter of three-tenths of an inch, may be considered of good quality electrically if the resistance per mile which it opposes to the passage of a current does not exceed $5\frac{1}{2}$ of Siemens' mercury units. I have made choice of Siemens' units for the expression of the resistance (the inverse of conductivity) because that unit was adopted by the Home Government for the expression of the resistances in the submarine cable enquiry of 1861.

191. On the receipt of the apparatus for which I have indented I shall be in a position to fix on a fair standard of conductivity to be insisted on in all supplies of line wire that may thereafter be sent out.

192. The limit of tenacity I would be disposed to lay down is such that the wire used for line purposes should not break under a less strain than that due to 24,000 feet of its own length, a limit which does not exceed what may reasonably be expected from English iron of fair commercial quality drawn or rather rolled to No. 1 size, and that

in the Nos. 8 and 12 steel wire used in air spans the breaking weight should not be less than that due to 55,000 and 60,000 feet of their own lengths respectively. These numbers are equivalent to 35.7, 81.8 and 99.3 tons per square inch, strengths in no way extraordinary for wires rolled as in the case of No. 1 iron wire or drawn down as in the case of the steel wire to the sizes mentioned.

193. The conditions of conductivity and tenacity above laid down would suffice were each coil of line wire uniform in strength throughout its entire length, but this unfortunately is not the case. Wire of No. 1 size is received in coils weighing $2\frac{1}{2}$ cwt. and measuring one-fourth of a mile in length, each composed of four separate pieces welded end to end. The process of welding materially reduces the diameter and strength of the wire at the junction, and it is at these weakened points that the fractures caused by the contraction of the wire during cold weather always occur.

194. It is, therefore, most desirable that all welds should be avoided, and that the wire should be delivered in the greatest lengths it is possible to manufacture without welds and without material enhancement in the cost. The coils of No. 1 wire, as usually sent out, are, as stated, one-fifth of a mile in lengths, and weigh $2\frac{1}{2}$ cwt. each, but there does not appear to me any reason why a mass of iron of this weight should not be rolled into a continuous length of one quarter of a mile.

195. It would suffice, however, were the coils of wire to be one-fifth of a mile in length instead of one-fourth, for there would then be only five joints per mile instead of 16 as at present. The weight of this reduced length, viz. 2 cwt. or $5\frac{1}{2}$ maunds, would be more suitable for camel carriage than that of the present coils, which weigh only seven seers short of seven maunds.

196. I feel, therefore, disposed for the present to recommend that in future Indents for No. 1 wire it should be required to be delivered in coils one-fifth of a mile in length free of weld or other joint; that its ultimate tenacity should be such as not to break under a less strain than that due to 24,000 feet of its own length; and that its resistance to current per mile should not exceed $5\frac{1}{2}$ of Siemens' units. The experiments which will be made will probably, however, shew that some alteration in the last number is necessary.

197. *Ingot Joints*.—Hitherto zinc has been used for these, the quantity necessary for each being 1lb. 2oz, or at the rate of 15 lbs. per mile of line wire.

198. As mentioned in paragraph 25, such massive joints offer great temptation to theft. I have lately experimented on alloys, which, while not materially exceeding zinc in cost, will so much exceed it in strength, as to permit of the joint being made with a quantity of metal too small to offer any inducement for cutting the wire for the sake of the metal composing the joints. The absence of suitable workshop accommodation has much interfered with these and other experiments.

SECTION VII.

ESTABLISHMENTS.

199. The strength of the Establishment at the beginning and end of the year was, exclusive of Office servants and others drawing less than Rupees 10 per mensem, as follows:—

GRADE.					Strength on the 30th April 1861.	Strength on the 30th April 1862.
Director General	...	...	...	...	1	1
Directors of Divisions	...	...	...	...	3	3
Superintendents	...	...	...	...	10	15
Assistant Superintendents	...	...	...	...	6	10
1st Inspectors,	...	...	...	...	80	20
2nd ditto,	...	...	...	...
3rd ditto,	...	...	...	...
4th ditto,	...	...	...	...
Assistants in charge of Offices and Signallers	...	...	...	...	548	534
Ditto ditto ditto ditto (Native)	...	...	...	...
Probationers	...	...	...	...	128	72
Ditto (Native)	...	...	...	...
Line Artificers	...	...	...	...	118	41
Mounted Artificers, Patrols, Mistrees, Muccadums, Jemadars, Lascars, and other Line Establishments	...	...	...	...	99	157
Compiler of Telegraph Accounts (late Assistant Auditor)	...	...	...	...	1	1
Head Clerks and Accountants	...	...	...	...	12	13
Clerks, Assistant Accountants, Record-keepers, Cash-keepers, Writers, Sircars, &c.	...	...	...	...	153	143
Store-keepers	...	...	...	...	8	2
Superintendent of Printing Office, Compositors, Press-men, Lithographers	...	...	...	...	18	16
Workshop Artificers	...	...	...	...	8	...
Total	...	...	...	...	1,193	1,194

200. The grounds of the various changes involved in the scheme of re-organization are detailed in the copy of my letter to Government, No. 1263 of the 20th August 1861, given as Appendix R.

201. Its principal features are in brief as follows:—

1st.—A general increase was made to the pay of the higher ranks of the Department.

2nd.—The proportions of the various grades of Signallers and the pay assigned to each was for the first time laid down.

3rd.—The same was done in respect of the various Office servants; but from the want of fuller details on local peculiarities, and the exceptions they necessitate, this was done provisionally merely and will require revision.

444.—A large number of idlers under the designation of horse patrols, line guards, &c., were struck off the Departmental list; and in their stead it was arranged that a native mounted Artificer should be stationed at every Office under the orders of the Assistant in charge, whose duty it would be to ride out on the occurrence of an interruption and take steps to remedy it. This addition to the Establishment is yet far from complete. Time is required to obtain select men.

544.—An increase from 10 to 15 was made in the number of Superintendents. A new grade, viz., that of Assistant Superintendent, was created for the special purpose of permitting that a chief Officer of the circle, whether the Superintendent or his Assistant should at all times be occupied in the very important duty of inspecting and controlling the working of the Lines and Offices—the proportion of the year that each should be so employed being four months in the case of the Superintendents, and eight months in that of the Assistant Superintendents,—an arrangement which ensures a continuous circle inspection without entailing, as had hitherto been the case, heavy arrears of Office work on the Superintendent who might have attempted to acquaint himself with the condition of his circle. The necessity of such constant inspection is indisputable, and how much it may advantage the credit of the Department and promote the interest of the public may be judged from the marked improvement which has taken place in the working of the East Coast Circle since Mr. Bailey took charge, and which is attributable to the extensive inspections which that Officer made of his lines as mentioned in paragraph 187 of last Report.

202. The above changes were introduced during a year of great financial difficulty, when, therefore, had increases to the gross expenditure on establishments been considered desirable, they could not have been proposed. My object was, therefore, to make the best use in my power of the pecuniary means at my disposal; and although a general increase was made in the salaries of the higher grades, and the number of persons in these grades was also increased as well as numerous increases to the pay of Signallers, this was effected with an immediate incidental saving of Rupees 3,756-5-6 per month, a saving which, as the various grades are brought up to the intended strength, will become reduced to Rupees 2,906-5-6 monthly.

203. *Signallers*.—A marked improvement has taken place in the conduct of this class since last Report; and the newly created grade of Assistant Superintendent, will prove a powerful auxiliary in weeding out the remaining bad characters. Dismissals, and resignations, to avoid dismissal, are already much less frequent than formerly.

204. The Register of characters mentioned in paragraph 176 of last Report doubtless exercises a powerful influence over the conduct of the Signallers. The promotions on the re-organization have in many instances led to enquiries from those passed over, and the replies, giving the reasons for withholding promotion, must have made it extensively known to the Signallers how large an influence character, as recorded on their character sheets, would for the future have on their prospects in the Department.

205. Much discontent, tending doubtless to reckless conduct, has been removed by controlling the power previously exercised by Superintendents and others of inflicting on Signallers fines that were frequently disproportionately heavy, both as regards the nature of the offence and the salary drawn by the person fined. Rules limiting the amount of fine and restricting the power of fining to certain grades in the Department are given in Circular 119, Appendix V.

206. The allowance to persons of the Department serving in the Province of Pegu, referred to in paragraph 180 of last Report, was, as mentioned in paragraph 2 of the present Report under the head "History", sanctioned in June 1861, the result has been satisfactory.

207. *Training of Signallers.*—The number of Signallers trained in the Department during the year, and the number so trained who remained in the Department at the end of the year, is at follows:—

		Remaining under training at the end of 1860-61.	Admitted for training during the year.	Total.	DEDUCT.					Remaining under training at end of year.
					Sent out to Office.	Absconded.	Dismissed.	Died.	Total.	
Barrackpore School	...	18	58	76	37	8	10	0	50	26
Meerut	...	46	0	46	33	4	8	1	46	0
Madras	...	20	42	62	60	1	1	0	62	0
Bombay	...	4	0	4	3	0	1	0	4	0
In Offices	...	5	30	35	0	0	0	0	35	0

208. *Casualties.*—The number of deaths, resignations, dismissals, and desertions in each grade during the year is as follows:—

GRADES.			CASUALTIES 1861-62.					TOTAL.
			Resignation.	Desertion.	Death.	Services dispensed with.	Dismissal.	
Director General	...	...	1	...	...	...	...	1
Directors	...	...	...	...	...	...	...	...
Superintendents	...	...	...	...	...	...	...	...
Assistant Superintendents	...	...	...	...	2	...	...	2
Inspectors	...	...	2	1	4	...	1	8
Carried forward	...	...	3	1	6	...	1	11

GRADES.	CASUALTIES 1861-62.					TOTAL.
	Resignation.	Deser- tion.	Death.	Services dis- pens-ed with.	Dismissal.	
Brought forward ...	3	1	6	...	1	11
Morse Assistants ...	1	..	...	...	...	1
Assistants in Charge ...	2	...	...	...	1	3
Signallers ...	32	2	6	1	35	76
Probationers ...	...	...	1	...	28	29
European Artificers ...	4	...	1	1	25	31
Native Artificers ...	...	...	...	...	2	2
Mounted Patrols ...	...	...	1	...	4	5
Jemadars ...	...	...	...	...	2	2
Accountants ...	5	...	...	...	3	8
Assistant Accountants ...	...	...	...	...	1	1
Clerks ...	8	...	2	4	16	30
Total ...	55	3	17	6	118	199

Re-admissions.

209. The number of re-admissions during the year was as follows :

Inspectors	...	...	..	1
Signallers				6

Total

Services of Officers.

210. It has been usual in the Annual Reports of this Department to mention the names of such Officers in it as had rendered marked good services. Such mention will here be confined to Officers in the grade of Superintendents, or who were officiating in that grade, and this in the order of their Departmental seniority.

211. Messrs. Bailey, O'Donnell, Galbraith, Wickham, Teale, M. K. Man, H. J. Walton, and Lieutenant Mallock, who were favorably mentioned in last Report, continue to justify the good opinion there given of them.

212. Mr. H. Man, in charge of the Scinde Circle, has not afforded me much opportunity for forming a judgement on the manner in which he has managed his Circle ; his Reports being meagre and scarcely, I fear, doing himself full justice, and his Circle not being on any of the main lines of traffic is thus removed from observation. If, however, a conclusion may be drawn from the interruption Reports, it will be seen that in the very important item of keeping his lines free from interruption, the Scinde Circle stands second on the list, a result largely to his credit.

213. Messrs. Moberly, Bence, and Lane, during the four months they have held Circle charge, have given me no grounds for regretting the recommendation which led to their promotion.

SECTION VIII.

FINANCE.

214. *Introduction of the new system of Estimates, Budget, Audit and Accounts.*—Under the system of financial arrangements for this Department in force up to the commencement of the past Official year advances were obtained under monthly estimates prepared by the Superintendents of Circles, which, after check by the Head of the Department, were submitted to the Supreme Government for sanction. This sanction when obtained was communicated to the Local Governments concerned, on whose authority the necessary advances were placed at the disposal of Superintendents from the various Treasuries in the proportions stated as required from each.

215. These advances were drawn upon by the Superintendents as funds were required for the payment of bills, but were not available beyond the month for the expenses payable during which they had been obtained, all undrawn balances then lapsing.

216. The bills after payment as above were forwarded to the Head of the Department for audit, and after return to Superintendents of Circles were charged in the accounts current and accompanied them to the Accountant General as vouchers.

217. A new system of accounts was introduced on the 1st May 1861 simultaneously with the new Budget system.

218. The object of the new Budget system was to render the limitations on the expenditure of Departments more stringent than previously by the creation of a Special Department, termed the Audit Board, for restricting the expenditure of the year to the limit within which sanction had been obtained.

219. The principles which were to regulate the methods of accounts of the Department were laid down in paragraphs 5 and 11 of the Budget and Audit Committee's Reports of 15th October 1860 and 22nd February 1861. These were in general feature as follows:—The Audit of the bills and the examination of the accounts which had been partly Departmental and partly under the Civil Auditors of Governments and Provinces were conducted by the Auditor General with the aid of a Special Assistant, who had also the like duties to perform in respect of the accounts of the Post Office. As, however, the specialities of this Department necessitated some Departmental supervision over expenditure which it was not to be expected could be efficiently checked by Clerks devoid of Departmental training, the establishment which had been employed under the Head of the Department in the audit of its accounts was continued for the purpose of conducting a preliminary audit; the Head of that branch of the Director General's Office receiving the title of Compiler of Telegraph Accounts.

220. The theory therefore was the transfer of all Departmental expenditure to independent control, but in reality no change was made except to transfer fixed charges, as of salary, from the Civil Auditors of Governments and Provinces to the Civil Auditor

General of India. The amount so transferred being very exactly 1-8th of the total expenditure of the Department, the remaining 7-8ths in reality still remaining under Departmental Audit.

221. Although the arrears of accounts had during the previous official year been much reduced, viz., by Rupees 6,53,922-5-6, yet those which remained at the commencement of the year under report were sufficiently heavy to offer a serious obstacle to the introduction of the new system which entailed heavy labor from the many new forms and the numerous explanatory letters that became necessary.

222. Through the unremitting exertions of Mr. Lima, the Head of the Account Branch of my Office, it was found possible simultaneously with the preliminary audit of current accounts on the new system to reduce the arrear accounts during the year by Rupees 2,37,399.

223. It was found very shortly after the introduction of the new system of accounts that they required modification in some important points.

224. The method of obtaining funds for the payment of bills was as before by credits on Treasuries, and as before the credits lapsed on the termination of the month for the expenditure of which they had been demanded, but there was this difference in the two cases that, whereas these credits under the old system provided for the payment of advances, those under the new system were for the payment of expenses actually incurred, whether as salary or as contingency, and the lapsing of letters of credit through uncontrollable delays in the submission of bills, whether owing to the great postal distance between Calcutta and the Offices concerned, or other causes, led to extreme inconvenience to the persons, the payment of whose salaries or actual expenditure was thus refused at Treasuries.

225. To remedy this it was therefore arranged that the currency of letters of credit should be available without limit of time in payment of the bills for which the credits had been issued.

226. It was also found necessary in the Pegu and Scinde Circles, owing to the long time occupied in postal communication in those Provinces, to issue one letter of credit only for the entire of each Circle, payment of the bills of Offices in the interior being made from Treasuries on the Authorities of telegrams addressed by Superintendents to the Treasury Offices, and on salary or other bills presented in duplicate by the payees; the countersignature of Superintendents to the bills elsewhere held to be indispensable to payment being in these cases waived. This change was simply a return to the old method of obtaining funds.

227. These payments are adjusted by transfer receipts given to the Treasuries in the interior by the head quarter Treasury in exchange for the duplicate of the set of bills on which payment was made.

228. As the estimates of Circles must be prepared from two to three months before the submission of bills, it very frequently occurs, owing to unavoidable changes in the strengths of the establishments of Offices that the amount estimated for as required

at particular Treasuries is less than what is subsequently found to be necessary to meet the bills payable from such Treasuries.

229. In such cases great inconvenience was suffered, as in some instances Treasury Officers absolutely refused to pay any portion of such bills even to the extent of the credit available; in the majority of cases, however, payment was made but only to the extent provided for by the letters of credit. The result of this in the case of salary bills was that some portion of an Office establishment was paid in full, another portion in part, and the remainder not at all; the adjustment being made at great expense of time and trouble by the submission of fresh bills for these fractions of pay or for the salaries which had not been paid, and by the issue of fresh letters of credit to meet them.

230. At some Treasuries when the credits were insufficient to meet the bills presented, these were nevertheless paid in full; the necessary credits being afterwards obtained on the application of the Treasury Officers themselves either direct or through the Heads of Circles—a course in my opinion that would have been greatly to the interest of the public service had it been followed by all Treasury Officers.

231. In the case of funds required for construction purposes, that is to say as respects about one-third of the entire Departmental expenditure, the new system was found wholly inapplicable, and it became so far necessary to continue the old system in use.

232. In my reply No. 8539 of the 10th January 1861, to the request of the Civil Finance Committee for my opinion on the mode in which the accounts of the Department should be audited and made up, I deprecated the introduction of any new system, believing that far more depends on the manner in which a system is worked than on the system itself; and urged that while there appeared to me no obstacle to the improvement of the existing system where considered faulty, there were very great disadvantages in any change in a Department such as this, spread over enormous geographical limits, and worked by persons with, as a rule, no knowledge of general accounts.

233. The results have justified my anticipations, the past year has been a year of confusion in accounts and of extreme labor to every one in the Department at all connected with them.

234. Part of this is due to the change of system, and was so far unavoidable; but much is chargeable to the absence of detailed explanations and of the minor arrangements indispensable for the success of any new scheme.

235. Indeed it was only by the freest use of the Telegraph, that the new system was prevented breaking down at once, and even up to the close of the year under report there were points in the system on which some of the most intelligent of the Superintendents were still in doubt.

236. As an example of what has been stated, the following is a memorandum of the revisions of accounts current which have been made, or proposed, or considered necessary, chiefly owing to misapprehensions of the new system:—

Indore, Dacca, and Pegu.*—The cash accounts current for the whole year were revised.

* The Dacca accounts were twice revised, and a third revision has been proposed by the Superintendent.

Central India.—Intimation lately sent to the Superintendent that all his accounts are wrong and require revision.

Punjab, Bombay, and Scinde.—A revision of the cash accounts current has been proposed by the Superintendents themselves.

Madras, East Coast, and South-East Coast.—The accounts are with the Auditor General, but will most probably require revision.

237. It would be here out of place to detail the various changes which the new system has introduced into the accounts generally ; but as an example of those I will take the case of the most important of these documents, viz., the cash account current, and will explain wherein the differences between the two systems lie, and shew to what extent the changes introduced have been improvements. The comparisons are for convenience exhibited in parallel columns.

Old Account Current.

It was simpler than the new.

The charges adjusted in each month were shown in the accounts current for that month without distinction of years, such not having on the old Budget system been necessary. An additional column would have removed all objections on this score.

The disbursements were prior to audit entered in the account in the gross as "inefficient balance," and a Statement annexed shewed the portion of this balance for which bills had been submitted for audit and that for which bills had not been received from subordinates ; when audited the bills were written off under "construction" and "working" in detail. The body of the account current contained therefore full information of the details of all disbursements, but of course frequently in considerable arrear.

The pre-audit system which I recommended for adoption to the Finance Committee would have got rid entirely of inefficient balance, and would have much simplified the account current.

New Account Current.

Examples of the difficulty experienced in comprehending this form are given in paragraph 236.

It was indispensable on account of the new Budget system that the charges proper to each year should be kept distinct. To meet this an additional column was introduced for the purpose of exhibiting the arrear charges of previous years.

The disbursements prior to audit are entered in the body of the account in the gross as unadjusted disbursements, but to each account current a paper is attached in which are exhibited the details of all bills which have been adjusted during the month, that is to say, the details of the amount by which the inefficient balance has by the audit of bills been reduced. The entire details of the expenditure are thus thrust out of the body of the account current.

I have no idea of the object with which this change has been made. The details of unaudited disbursements, if given in the body of the account for the month in which the payment was made, would be useful, as it is, these details must always be some months in arrear. Pre audit will remove all these difficulties.

238. In my letter to the Civil Audit Committee referred to in paragraph 232, while suggesting that the methods of account should rather be amended than changed, I made two proposals, the first for the introduction of pre-audit, which I conceived might without inconvenience be extended to the entire Department, the other of a means by which the numerous petty accounts current between Superintendents and those under them might be entirely got rid of.

239. The proposal for the audit of accounts before payment was not approved of by the Finance Commission on the ground that, owing to the great distances of many of the Offices from Calcutta, inconvenient delay might occur in the payment of salaries. Its conveniences, however, were so obvious and so great, especially in avoiding the confusion caused in Circle accounts from the retrenchments in bills already paid, and the trouble of effecting recoveries, that the plan has been gradually introduced during the year into the Bengal and Punjab Circles with very great advantage, and with evidence that its further extension is practicable.

240. Objections to the introduction of the system into the Pegu and Dacca Circles, based on the great postal distances from Calcutta of many parts of those Circles, have been raised by their Superintendents, but I have no doubt whatever that arrangements may be made to meet these cases.

241. At any rate the gain from the extension of pre-audit to the entire Department will be so great as to be well worth an effort. Much labor will be thereby saved to Superintendents, and much worry to all parties in the recovery of retrenched items, and the impossibility of obtaining payment until after audit of the bills will be a wholesome stimulus to the prompt rendering and auditing of bills; and so far as the pre-audit system may be extended, it will relieve the accounts current of Superintendents of all items of inefficient balance, and will render the Memorandum giving the details of bills which is attached to the accounts current or any modification proper for exhibiting this information in the body of the account current itself unnecessary.

242. The system of letters of credit which was introduced with the new accounts is retained under the pre-audit system, but it is a source of much inconvenience, as mentioned in paragraph 229, and might without prejudice to Budget requirements be replaced by a mere monthly list of the amounts passed.

243. The abolition of the system of letters of credit would render the following documents unnecessary :—

1st.—The monthly estimates from the Superintendents of Circles to the Director General.

2nd.—The Director General's separate estimates from the several Circles forwarded to the Accountant General.

3rd.—The advice sent from the Director General's Office to Superintendents of the date on which applications for credits had been sent.

4th.—The issue of credits by the Accountant General to the several Treasuries from which funds are required.

5th.—The registry in the Accountant General's Office of the above issues.

6th.—The Treasury Officer's endorsement of the extent by which the credit had been drawn on, and the balance which remained undrawn and cancelled.

7th.—The Treasury Officer's register of the above.

8th.—The advices from Circle Superintendents to Treasury Officers of the particulars of bills countersigned by them for payment and of the balance to be cancelled.

244. Under the change suggested Treasury Officers would receive advice from the Director General's Office not of the estimated but of the actual cash demands that would be made on their Treasuries, and the Accountant General's check over the progressive expenditure under the Budget would be based not on the prospective estimates compiled in the Director General's Office from the Circles' estimates, but on the actual expenditure.

245. The vexations arising from these credits mentioned in paragraph 220 and the consequent necessity of issuing fresh credits, fresh advices, and so on throughout the series of documents already enumerated, would under the change be also avoided.

246. Under the pre-audit system the submission of detailed bills in duplicate seems unnecessary. The duplicate is required as a voucher by Treasury Officers, but surely an ordinary receipt should serve the purpose just as well, and the saving both of labor and stationery produced by the substitution would be great.

247. The second of the propositions referred to in paragraph 238 as having been made to the Finance Committee was that each Assistant having contingent disbursements should be furnished with a standing advance out of which to make all necessary cash payments. By such an arrangement the necessity of advances by the Head of the Circle to those so situated under him, and of the numerous Accounts Current to which these advances gave rise, was avoided.

248. This proposal was approved, and a standing advance of Rupees 50 was allowed to each Head of a Telegraph Office and Line Inspector liable to contingent expenditure. The amounts being, however, in some cases much in excess to the requirements of Assistants and in others in defect, a redistribution has become necessary. Superintendents of Circles have been called on to submit revised scales, and when the allowance has been re-adjusted to actual requirements, no objection will remain to the immediate extension of the pre-audit system so far as the contingent disbursements are concerned to every Circle of the Department.

249. The system of permanent advances was merely intended to meet the case of contingent working charges; but its convenience proved so great that it was departmentally extended to that of construction also, the advance being permanent until the completion of the construction when it is refunded to the nearest Treasury. By this arrangement delays in the submission of accounts is prevented, the accounts are closed monthly, and no sums can at any time be held by Sub-Officers in excess of the amount of standing advance.

II.—Expenditure.

250. The charges of the Department for the year were as follows :

Particulars.	Establishment.			Contingencies.			Total.		
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
<i>On Working Account.</i>									
For General Superintendence, being charges on account of the Director General and the Account, Complaint, Fault, Cash-checker and Service Mess-ango Examiner's Branches of his Office ...	48,300	4	0	1,816	15	0	50,177	3	0
For General Store Branch, being charges on account of the Store Superintendent and his Office Establishment and for supply of Stores to the Department, but chiefly to the Bengal, Punjab, Pegu, Dacca and East Coast Circles.	14,844	0	0	86,892	4	9	1,01,736	4	9
For the General Printing Office, being charges on account of the Establishment and for supply of Forms, &c., to the Department, and for cost of publication of the Departmental Gazette, Circulars and Orders ...	6,356	8	9	8,405	12	4	14,762	5	1
For Divisional and Circle Superintendence and for all Signal Offices (including about Rupees 35,000 Office rent, and about Rupees 7,000 horse and travelling allowance) ...	6,59,857	15	1	1,62,161	5	0	8,22,019	4	1
For Line charges including annual repairs ...	2,25,259	11	8	2,01,607	5	2	4,26,867	0	10
Total of Working Charges ...	9,54,678	7	6	4,60,883	10	3	14,15,562	1	9
<i>On Construction Account.</i>									
General Store Branch for supply of posts and materials, and for freight on imported stores including also inland freight ...	.....			27,318	6	8	27,318	6	8
Construction of new lines ...	.....			54,566	3	2	54,566	3	2
Re-construction of old lines ...	.....			1,37,718	7	3	1,37,718	7	3
Total of Construction Charges ...	.....			2,19,603	1	1	2,19,603	1	1
Grand Total ...	9,54,678	7	6	6,80,486	11	4	16,35,163	2	10

251. As respects the distribution of the charges reliable information was not available from the Accountant General's Office. It had, therefore, to be sought from the Superintendent of Circles; but up to the date of printing the information could not be obtained either from the Scinde or Pegu Circles. The Statement as respects the distribution as well as the totals is, consequently, open to small corrections as respects these Circles.

252. In addition to the charges proper to the year, payments were made on account of previous years to the following extent:—

	Rs.	As.	P.
On Working Account	17,614	1	5½
On Construction Account	9,173	15	0
Total ...	26,788	0	5½

253. In order to render comparable the working expenditure on account of Establishments for the year under report with that for the two years immediately preceding, some corrections are required to the Statements of Expenditure given in the Reports of those years by the deduction of items of charges not common to all three years, or not properly chargeable to the working establishment expenses.

254. In the report for 1859-60 the item temporary workshop establishment has been included with working charges but excluded from those charges in the 2 following years. Again Office rents appear among the Establishment charges of 1859-60 and of 1861-62, but are excluded from those for the intervening year.

255. Making the corrections required on account of these two items, the charges on account of working Establishments for the three years stand as shewn in the following Table:—

	1859-60.	1860-61.	1861-62.
Establishment expenses as exhibited in the Reports	10,57,452	8,81,005	9,54,678
DEDUCT.			
Temporary workshop Establishments	12,126	.. ..	.....
Office Rents... ..	44,148	.....	38,747
Total ...	50,274	.....	38,747
Actual expenses of working estab- lishment	10,01,178	8,81,005	9,15,931

256. The working expenses of the year under the head Establishments are, therefore, Rupees 85,247 less than those for the year 1859-60, and Rupees 34,926 in excess of those for the year 1860-61.

257. This excess in expenditure over that for last year is due to a general increase in the pay of the higher grades of the Department as well as to increases of a less general nature to that of persons in the Signalling grades consequent on the re-organization.

258. The absence of any information on the subject of the contingent charges of 1859-60 does not permit of the comparison being extended to this item.

Revenue.

259. THE collections on account of Service and Private messages during the year were as follows :—

					Rs.	As.	P.
Service	...	...	...	...	1,25,841	7	5
Private	...	...	...	...	5,48,582	12	1
Total	...				6,74,424	3	6

260. The above excludes all payments on account of the messages sent by the Officers of the Department on its business, as well as the Ceylon Government Share of the collections on account of messages which in any part of their course have to enter the lines of that Government, the amount of the former being refunded on audited bills, and neither, therefore, exercising any real influence on the income of the Department.

261. The Statement of course includes the receipts by the Ceylon Government lines on account of the lines of this Department.

262. A comparison of the above receipts with those of the previous year exhibits an increase of Rupees 6,359-14-0, or 5·32 per cent., on account of *Service* messages, and of Rupees 42,860-13-11, or 8·47 per cent., on account of *private* messages. The total increase being Rupees 49,220-11-11, or 7·87 per cent.

263. The proportions of the increase on account of *private* messages alone due to the several Circles are as follow :—

				Rs.	As.	P.		
Bengal	...	...	...	15,923	5	9	or per cent.	10·90
Bombay	...	...	...	1,661	0	2	"	1·11
Madras	...	...	...	2,554	12	3	"	3·66
Pegu	...	...	...	9,934	1	2	"	93·33
Central India	...	...	...	4,914	3	0	"	32·45
Dacca	...	...	...	3,805	8	3	"	95·79
East Coast	...	...	...	1,889	0	10	"	6·78
Scinde	...	...	...	79	13	6	"	0·61
South-East Coast	...	...	...	1,838	2	6	"	55·27
Collections due by Ceylon	...	...	...	6,870	13	11	"	57·29
Total	...			49,470	13	4	or per cent.	9·78

264. From this has to be deducted the decreases in the collections of the following Circles :—

				Rs.	As.	P.		
Punjab	...	...	...	644	6	5	or per cent.	2·03
Indore	...	...	...	5,965	9	0	"	24·64
Total				6,609	15	5	or per cent.	1·30

265. The above results are exhibited in detail in Appendix S which shows the working of the year under report as contrasted with that of the preceding year.

266. The largest proportions of increases are those in the Dacca and Pegu Circles, and are, doubtless, due to the connection of the latter Province with India by the laying, of the Sub-marine line between the Western Borungo and Ramree Islands, as mentioned in paragraph 14 of last Report.

267. The increase of 55·27 per cent. in the collections of the South-East Coast Line and that of 57·29 per cent. on account of this Department in the Offices of the Ceylon Government Lines are in part due to the opening of the line to Tuticorin but chiefly to the number of messages sent by Merchants residing in that neighbourhood regarding the rates for cotton, contracts and freights for cotton, money demands for cotton, &c., &c.

268. The decrease in the collections of the Indore Circle may be ascribed to depression of the Opium trade, as also perhaps to the increased duty on it.

269. It should be borne in mind that although the River lines are almost exclusively employed on the business of the Marine Department, no portion of their cost or of that of the establishment or boats employed in the service of those lines is borne by that Department, nor are the messages transmitted along those lines on account of that Department charged for, or credit taken for their value, in the Departmental accounts.

270. From the Statement given as Appendix T it will be seen that whereas the working expenses of all natures for the year have been Rs. 14,15,562-1-9, the income from all sources has been Rs. 6,96,691-1-1, or 49·216 per cent. of the expenditure.

271. As it was not found possible to distribute the charges on account of the messages sent by Officers of the Department on its business under the heads of Line and Office Contingencies, it became necessary in the above Statement to retain as income the receipts from Departmental messages, and in the disbursements the amount refunded by Audited Bills on account of these messages. Deducting these amounts the Working Account will stand as follows :—

	Rs.	As.	P.
Working Expense of the year	14,05,422	15	0
Receipts	6,86,551	14	4

These last being 48·85 per cent. of the Working Expenditure.

SECTION IX.

GENERAL MANAGEMENT.

272. This will be best illustrated by the Circular instructions issued to the Department during the year so far as they affect its general management. Copies of those, with such corrections as have been made on re-issue, and numbering 20, are given in Appendix V. Those excluded are 61 in number, and are such as were either of a temporary character, or on matters of audit and account, and which, being in no way peculiar to this Department, can throw no light whatever on the character of its administration

List of Circulars.

No. of Circular.	SUBJECTS.	Illustrating paragraph.
31	Classification of messages and precautions in respect of confidential messages ...	91
108	Prohibiting certain liberties being taken with signalling instruments.	
113	Arrangements whereby early reply may be given to complaints.	
115	Introducing Madras time as the Telegraph time for all India...	121
117	On the disuse of Salt in Batteries.	
118	Giving a Table of Electrical resistances and explaining its applications.	
119	Limiting the amount of fines inflicted on signallers ...	205
120	Introducing new forms of reports of cash collections.	
121	Prescribing a Vernacular notice of undelivered messages addressed to Natives ...	104
126	On the fines to be inflicted on signallers, &c., for error or loss in messages ...	97
130	Precautions when signalling names, &c. ...	94
137	Prohibition to the translation by signallers of the messages of Native senders ...	131
140	Correction of an error in the mode of charging for messages.	
143	Introducing a change in the arrangements of Siemens' Morse Instruments ...	156
143½	Directing a copy of every newspaper or periodical which contains unfavorable notices of the Department to be sent to the Director General with explanation	
144	Relaxation of the rule respecting the signatures to messages in respect of ships passing Telegraph Stations ...	132
145	Prohibiting abbreviations in signalling ...	133
147	Enjoining civility and courtesy in the official intercourse of the Department with the Public	
148	Introducing a form of printed letter to be used when returning messages for amendment.	
No. 1 (new series.)	Extending the period within which refunds will be made, and introducing the Office date into messages free of charge ...	93

Departmental Orders.

273. In paragraph 204 of last Report it was mentioned that, since the 1st January 1861, the Departmental orders had been issued in a printed form.

274. As, however, it is never necessary to communicate such orders *immediately* to others than the persons affected by the orders or responsible for their execution, it is obviously sufficient, for the general information of the Department and record, if these orders are published periodically.

275. This view has accordingly been acted on since October 1861, from which date all orders susceptible of such treatment have been published in a tabular form at the close of each month.

276. The orders are besides at once communicated to the persons concerned by printed forms, corresponding with the six forms made use of for their monthly tabulation in the Departmental orders. As an example of the abbreviation which becomes possible by thus tabulating orders, the entire of the orders issued to the Department during the last month of the official year are given as Appendix W.

(Signed) C. DOUGLAS, *Lieut.-Col.,*
Director Genl. of Telegraphs.

APPENDICES

TO THE

ANNUAL REPORT

ON THE

ADMINISTRATION OF THE ELECTRIC TELEGRAPH,

FOR THE YEAR 1861-62.

APPENDIX A.

From the Civil Finance Commission, to C. H. LUSHINGTON, Esquire, Secretary to the Government of India, Financial Department,—No. 442, dated Fort William, the 8th June 1861.

IN paragraphs 14 and 15 of our Report on the Budget of the Electric Telegraph Department we adverted to the expense which is incurred in keeping up establishments at the intermediate Offices for messages sent from one principal station to another (for example, from Calcutta to Bombay) through those intermediate Offices.

2. We remarked that these establishments could be saved, and the intermediate Offices be worked at a trifling expenso if they could be restricted to transmitting their own messages, while the principal Offices were placed in direct communication with each other.

3. We thought that this direct communication might be helped by recourse to insulated lines.

4. Furthermore, we alluded to the facility which the Morse* instrument seems

* The Morse instrument repeats automatically a message received from one station, and sends it on to the next with renewed electric power, thus sparing the labor and delay of repetition by Signallers, and avoiding the errors which manual repetition often causes."

to afford for connecting the relay stations on a long line so as to send a message the whole distance without

using the establishments at the relay stations.

5. On these professional matters we could only throw out suggestions without venturing to offer an opinion.

6. In the same spirit we could now solicit attention to an article in page 141 of the *Mechanic's Magazine* for March 1861, which seems to shew that messages are now transmitted in Europe from one extremity to another of a long line of telegraph by means of mechanical appliances only, (i. e., without human agency) at the intermediate or relay stations, and that this is effected on a principle somewhat similar to that which we conceived to be involved in Sir William O'Shaughnessy's description of the Morse instrument, as quoted in the margin of our 4th paragraph.

7. The article in the *Mechanic's Magazine*, to which we have referred, describes how Colonel Shaffner, at a late Meeting of the Royal Geographical Society, illustrated the electric circuits. In the second part of his subject Colonel Shaffner shewed the process "of combining two or more electric circuits together so as to overcome distance "and to avoid the re-transmission of despatches by the hand." The experiments were designed to shew that by such a combination of short circuits direct communication might be maintained, for commercial purposes, between extremities of the long line of the North Atlantic Telegraph. It is stated that "the experiments were very successful and were highly appreciated by the large and distinguished auditory." In conclusion, Colonel Shaffner said :—"The respective circuits of the North Atlantic Telegraph

will be within the bounds of known practicabilities, and we have no reason to expect other than the fullest success, and the attainment of a calculated celerity. There are no air lines or lines constructed on poles that work in circuits more than 500 miles. There is no retardation on such lines. The telegraph from London to St. Petersburg is about 1,900 miles, and upon that range there are eight relay stations. From London to Odessa the telegraph is about 3,500 miles, and there are about fourteen relay stations from London to Constantinople, it is about 3,200 miles, and there are about 12 relay stations. It is a common occurrence to work to the stations mentioned through the aid of mechanical contrivances. It is in this manner that telegraphic manipulations overcome long distances, and although the original electric spark will not leap with one bound from continent to continent by the North Atlantic Telegraph, the intelligence will pass between the hemispheres with a celerity commensurate with the wants of the age."

8. Colonel Shaffner, who thus shews that direct communication through long distances is practicable for ordinary uses, had previously for many years contended that a circuit of 2,000 miles cannot be practically employed with the known sciences for commercial telegraphy. His present views, therefore, appear to deserve attention, founded, as they are, on actual experiment, and bearing, as they do, on the means of economy in the Telegraph Department.

9. It is not merely for the financial saving that direct communication by telegraph is desirable between Calcutta or Madras and Bombay, and between other principal Offices: the gain in efficiency would also be great. The bulk of the messages consists, we apprehend, of those between Calcutta and Bombay, and a large staff of Signallers is retained accordingly in Calcutta and at Bombay. Now the messages from these two Offices converge on the intermediate Offices, which, instead of each having as many Signallers as the Bombay and the Calcutta Offices, have fewer Signallers. Under these circumstances, mistakes or delays in the intermediate Offices are perhaps to be expected, and thus the public may estimate the working of the Department by any failures of the intermediate Offices rather than by the efficiency of the Presidency Offices, for the strength of a chain is that of its weakest part. Direct communication between Calcutta and Bombay, between Madras and Bombay, &c., would obviate this disadvantage.

We have, &c.,

(Signed)	R. TEMPLE, <i>President.</i>	
"	H. SANDEMAN,	} <i>Members.</i>
"	R. H. HOLLINGBERY,	

No. 8150.

FORWARDED to the Officiating Director General of Telegraphs in India for report.
Original papers to be returned.

FORT WILLIAM,
Financial Department ;
The 3rd July 1861.

By Order,
(Signed) C. H. LUSHINGTON,
Secy. to the Govt. of India, Finl. Dept.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to W. GREY, Esquire, Secretary to the Government of India,—No. 3102A, dated the 4th March 1862.

REPLYING to the Civil Finance Commission's No. 412 of the 8th June, received under Financial Secretary's Docket No. 8150 of the 3rd July 1861, directing attention to an article in the *Mechanic's Magazine* for March 1861, and suggesting that the method of working Morse Instruments recommended by Colonel Shaffner should be adopted in the Government Telegraphs in this country.

2. Colonel Shaffner, though connected with Telegraphs in America, and author of a book on the subject comprising 150 pages of large octavo, is not considered, I believe, an authority on the subject of Telegraphs, and any recommendation he might make would require other support than his name to recommend it to the attention of professional men.

3. It so happens, however, that the principle of automatic working has, since its invention in 1837, been in use wherever the Morse system has been introduced.

4. Colonel Shaffner could not have been ignorant of this fact, assuming him to have any practical acquaintance with the Morse system of Telegraphs, or assuming him to be the author of the very meagre section of his volume on the Telegraph which describes the Morse system, of which authorship, however, there may be doubts, as he has publicly acknowledged that the electrical portion of his volume, which is of very low order and very erroneous, was not written by himself.

5. The probabilities are that his lecture to the Geographical Society had no other object than to popularize a subject at the time exciting much interest in England, viz., the re-establishment of communication by Telegraph between England and America.

6. The principle of automatic working which he refers to was introduced into India with the Morse system of Telegraph Instruments in 1857, and has since been generally practised.

7. It is a mistake to suppose, as is done in the 6th paragraph of the letter under reply, that the operation is independent of human agency. Although the signals are transmitted automatically this can only be done so long as the instrument is in good adjustment, and a Signaller is indispensably necessary at the instrument to watch the adjustment of the portion chiefly concerned in the automatic transmission, viz., the relay.

8. In paragraph 7 it is stated that Colonel Shaffner "shewed the process of combining two or more electrical circuits together so as to overcome distance and to avoid the re-transmission of despatches by the hand." The process is very simply explained and illustrated in the annexed* extract from Turnbull on the "Electro-Magnetic Telegraph," a work published in Philadelphia in 1853, but the arrangements are in practice much more complicated, as will be seen from the plate of connections* of three stations working

* It has not been considered necessary to give either the extract or the plate of connections.

in W, one of a set prepared by Messrs. Siemens in view to illustrate the use of their Morse instruments, and which accompanied those instruments to this country in 1857.

9. Colonel Shaffner is, in paragraph 7, quoted as saying:—"There are no air lines or lines constructed on poles that work in circuits more than perhaps 500 miles," or in other words, that the greatest distance through which effective signalling can be conducted is 250 miles (for the circuit includes the direct distance along the wire and the return of the current to its starting point, through the earth). On such a subject there is nothing absolute, the distance depending on the size of the conducting wire, on the nature of the insulation, on the state of the weather, on the sensibility of the instrument, and on the battery power used. In Europe with good porcelain insulators, and No. 8 wire and 40 Daniell's Elements a distance of 300 miles can be worked over in average weather, and 200 miles during the worst weather; whereas in India with 60 Daniell's Elements and No. 1 wire used *uninsulated*, although it offers only $\frac{1}{10}$ of the resistance to the current offered by No. 8 wire, we have in bad weather difficulty in working over distances of 120 miles, while in the present fine weather with 20 Daniell's Elements we can work over a distance of 400 miles, and a single Daniell's Element will suffice for transmission through a well insulated submarine line of 500 miles in length.

10. In paragraph 8 Colonel Shaffner is quoted as having "previously for many years contended that a circuit of 2,000 miles cannot be practically employed with the known sciences for commercial telegraphy." He here clearly refers to submarine lines; his meaning is that telegraphic communication cannot practically be conducted through such lines between places 1,000 miles apart. This statement had in view no doubt the failure of the Atlantic cable. The causes of its failure are now known, and no doubt is entertained of the possibility of signalling at reasonable speed through a properly constructed cable of even 2,000 miles in length, although the "inductive" difficulties in such a cable would be sixteen times as great as those offered in Colonel Shaffner's limit mentioned below. I notice this statement in view to shew that the Civil Finance Commission have misapprehended its purport, and that it gives no foundation for the charge of views they impute to Colonel Shaffner.

11. He has stated his belief that direct signalling or signalling in a single circuit was only practicable in the case of air lines through circuits of more than 500 miles or to distances not exceeding 250 miles, and in the case of submarine lines through circuits of more than 1,000 miles or to distances not exceeding 500 miles. In neither case is there any such limit as has already been explained, but there is no reason for supposing that Colonel Shaffner at any time doubted the possibility of *indirect* automatic signalling over distances 10 or 12 times greater than the above, that is, through 10 or 12 separate circuits automatically connected.

12. Seeing from the examples given in the extract from Colonel Shaffner's lecture that automatic signalling is employed in Europe over distances of from 1,900 to 3,200 miles, it may perhaps be asked why the same is not always practised in India. The reply is, that unless a special wire connecting the distant places with each other is available the local business at the intermediate stations is sure constantly to interfere with direct automatic transmission.

13. As a rule work between Calcutta and Bombay is carried on automatically through the following sections of the line, viz., Calcutta to Benares, Benares to Agra, Agra to Indore, Indore to Bombay. In the first mentioned Section the five following separate Circuits are automatically combined, viz., Calcutta to Burdwan, Burdwan to Raneegunge, Raneegunge to Burhee, Burhee to Dehree, Dehree to Benares. In the 2nd Section the four following separate Circuits are similarly combined, viz., Benares to Allahabad, Allahabad to Cawnpore, Cawnpore to Futtighur, Futtighur to Agra. In the 3rd Section the four following separate Circuits are combined, viz., Agra to Gwalior, Gwalior to Seepree, Seepree to Beora, Beora to Indore; and in the 4th Section the five following separate Circuits are similarly combined, viz., Indore to Ackbepore, Ackbepore to Dhoolia, Dhoolia to Malliagaum, Malliagaum to Nassick, Nassick to Bombay. The Sections through which automatic communication with Bombay is *occasionally* carried on are Calcutta to Agra, and Agra to Bombay, in each case through nine separate Circuits automatically connected, and it will, at rare intervals, occur that the line is entirely disengaged, and that "through" automatic communication between Calcutta and Bombay is practicable. This happens owing to the work at all the intermediate Offices having been cleared off, and each Office as it becomes clear "joining over" as it is termed for automatic communication, as is always done when an Office is clear. In the case just mentioned (the line to Bombay), there are 18 separate Circuits automatically connected, whereas in the instance of the longest line which Colonel Shaffner has quoted, viz., that from London to Odessa, there are but 14. Now the difficulty to automatic transmission is entirely independent of the distance separating stations, provided this is not too great for decided signals, and depends solely on the number of separate Circuits, that is, of sets of instruments worked through; and assuming the stations to be 250 miles apart, which is Colonel Shaffner's limit, and which with adequate insulation would present no difficulty in India, the working effectively between Calcutta and Bombay would be equivalent to effective working over a distance of 4,500 miles. The distance from London to Odessa is about 2,200 miles,* and not 3,500 as stated by Colonel Shaffner, consequently the efficient automatic working of the 18 local Circuits between Calcutta and Bombay is equivalent to automatic working from London to a distance more than double of that to Odessa.

14. The power to work automatically through so many Circuits as 18, rarely, however, continues perfect for any length of time. Some one or other of the relays is pretty sure to require adjustment from currents of terrestrial or atmospheric electricity of varying intensity passing along the lines, and the Signallers at intermediate stations having, while through work is in progress, no work in their own Offices, neglect to keep that close watch on the adjustment of the relay which is absolutely indispensable to successful automatic transmission, a single instance of which neglect at any one of the 18 intermediate Offices of course puts a stop to through communication.

15. The impediments to direct automatic transmission, raising from intermediate traffic on the lines, would also seem to occur in Europe, although it is there usual to devote

* *Vide* the account of the Telegraph Soiree held at Manchester on the 7th of September 1861 in the *Mechanic's Magazine* for that month page 176, column 2.

a special wire to exclusive direct communication between important places. This is the case in the German and Austrian Telegraph Confederation, distinct wires being

Extract from the "*Malta Times*," 12th December 1861.

"On Thursday the 5th instant the Admiral received a telegram from the Lords of the Admiralty in four hours. This is the quickest message that has yet been received from England."

devoted to the exclusive service of the traffic between the several countries included in the union; were it otherwise, what explanation could be given of the fact, as shewn in the

marginal extract, that the quickest message on record between London and Malta, a distance *via* Italy of 1,400 miles, had occupied four hours in transit.

16. Another impediment to automatic transmission in India has till very lately existed. I allude to the practice of tying up a certain spring fixed to the under-side of the recording lever of the Morse Instrument, and whose sole purpose was to render automatic transmission a possibility. The important part played by this spring in automatic transmission does not appear to have been explained to the Assistants trained at Gresham House, by whom a knowledge of the Morse Instrument was introduced into India; and as the spring in question by acting as a damper to the sounding lever tended to render the operation of reading by sound less easy, the slight inconvenience which its presence caused was got rid of by tying it up, thereby preventing all motion in it, and, consequently, preventing automatic transmission through more than three or four stations except, at so slow a rate of signalling as to neutralize all benefit derivable from the automatic transmission.

17. There is, however, a difficulty in automatic transmission peculiar to the Indian Government lines. These lines offer the only example in the world of lines entirely devoid of insulation. During the rains the current with the largest batteries that can be employed frequently fails to produce decided indications on the relay of the next station. As a consequence, some of the beats at that station fail, and as such failed beats are omitted in the automatic transmission at the next station, and as additional beats are in each such onward transmission also left out, the result of automatic transmission through 18 successive instruments, as on the line hence to Bombay would not merely be to render the message unintelligible, but in extreme cases the message would, during transmission, entirely disappear.

(Signed) C. DOUGLAS, *Lient.-Col.,*
Dir. Genl. of Telegraphs in India.

Extract from the Proceedings of the Right Hon'ble the Governor General of India in Council, in the Home Department (Electric Telegraph),—No. 3233, under date the 30th June 1862.

READ again Resolution* of this Department, dated the 18th of July 1861, on communications from the Civil Finance Commission :—One, submitting copy of their Report on the Budget of the Electric Telegraph Department for 1861-62; the other, treating of certain alterations in the Electric Telegraph Department considered to be feasible.

* Copy forwarded to the Financial Department under Endorsement No. 1753.

Read the Reports of the Director General of Telegraphs in India on the above mentioned communications, viz :—

A. No. 3102A, dated 4th March 1862,
and

B. No. 206, dated 17th May.

RESOLUTION.—The Governor General in Council having considered the proposals of the Civil Finance Commission in regard to an alteration in the rates charged for Telegraphic Messages, and the information upon that subject contained in paragraphs 29 to 34 of Colonel Douglas's letter of the 17th May, is of opinion that it would not be advantageous to act upon the recommendation of the Civil Finance Commission.

The Governor General in Council is also satisfied that the proposal to dispense with the use of the intermediate Offices in transmitting messages between Calcutta and Bombay, and between Madras and Bombay, advocated by the Civil Finance Commission, is quite impracticable.

ORDERED, that copies of the letters marked A and B be forwarded with a copy of this Resolution to the Financial Department for information.

Ordered also, that copies of this Resolution be sent to the Civil Finance Commission and to the Director General of Telegraphs for information.

APPENDIX B.

From W. GRAY, Esquire, Secretary to the Government of India, Home Department, to the Secretary to the Bengal Chamber of Commerce,—Dated the 12th June 1861.

I AM desired to request that the Calcutta Chamber of Commerce will favor the Governor General in Council with their general opinion as to the efficiency of the Electric Telegraph for commercial purposes, and that they will be good enough to furnish a Statement of the total number of Messages sent or received during a given period, say from a week to a month previous to this date, by any Firms or Establishments connected with the Chamber, shewing what proportion of them were delivered with reasonable punctuality and correctness, and in what proportion any delay or error occurred so material as to detract from the commercial value of this means of communication.

2. His Excellency in Council desires me to add that, if the Chamber have any suggestions to offer for the improvement of the Telegraph Department, the Government will be glad to receive them.

(A similar letter was addressed to the Chambers of Commerce at Madras and Bombay.)

From H. BROOKE, Esquire, Secretary, Bombay Chamber of Commerce, to W. GRAY, Esquire, Secretary to the Government of India, Home Department,—Dated Bombay, the 5th August 1861.

By direction of the Committee of the Chamber of Commerce I have the honor to acknowledge receipt of your letter No. 1176, dated 12th June 1861, requesting a Statement of the total number of Messages sent or received by the Members of the Chamber through the Electric Telegraph during a given period, and desiring suggestions for the improvement of the Establishment.

The Committee have circulated your letter to the Members, and have received Returns from twenty-five Firms giving the following results:—

		Messages.
Received with reasonable punctuality and correctness	..	.. 274
With important errors or delays	.. ..	.. 16
Unintelligible or so delayed as to be rendered useless	..	.. 8
Total received between 1st April and 31st May		.. 298

Since the above period the delays have been very considerable on most of the Lines, but more particularly on that between Bombay and Calcutta, where Messages have not unfrequently taken six to eight days in transmission, and in several instances nine or ten days.

It appears to the Committee that, where the contents of the Messages are of no value to others than the addressee, and where the construction of the Message is simple and grammatical, there is but little ground for complaint; but it would seem that, where the temptations to divulge the contents of important Messages were considerable, and had been systematically brought to bear on the employés, their integrity was found to give way.

The Committee feel it difficult to suggest to Government a remedy for this state of things; but as complaints of similar delinquencies are not frequent in England, they would venture to suggest that the establishment of a Secret Committee under the guidance of an experienced Officer trained in England would probably have the effect of bringing to justice the real authors of these frauds. At the same time the Committee believe that an increased rate of salaries to the lower officials, with the prospect of rewards for exemplary conduct, would raise the general character of the Establishment and greatly promote its efficiency.

A copy of the Return by the Members is herewith forwarded for your information

Number of Telegrams received by Indian Telegraphs during the two months from 1st April to 31st May by the following Firms:—

HOW DELIVERED.

Names of the Firms.	With reasonable punctuality and correctness.	With important errors or delays.	Unintelligible or so delayed as to be rendered useless.
Messrs. Ritchie, Stewart & Co. ...	27	3	1
" William Nicol & Co. ...	29	None.	None.
" Robert Strong & Co. ...	11	"	"
" Wallace and Co. ...	11	2	"
" W. and A. Graham and Co. ...	16	None.	3 useless from delay. 1 unintelligible.
" A. H. Huschke and Co. ...	10	1	None.
" Lyon, Brothers and Co. ...	6	1	"
" Finlay, Scott and Co. ...	15	None.	"
" Lawrence and Co. ...	11	"	"
" Leggett and Co. ...	4	"	"
" Killick, Nixon and Co. ...	2	"	"
" S. Burstell and Co. ...	6	1	1
" W. J. Morgan and Co. ...	5	None.	1
" Stearns, Hobart and Co. ...	11	8	1
" Watson, Bogle and Co. ...	161	16	8
" Alexander C. Brice and Co. ...	18	Since 15th May the delays have been unusually great, probably caused by the monsoon.	
" Grey and Co. ...	6	None.	None.
" Cardwell, Parsons and Co. ...	4	"	"
" G. S. King and Co. ...	We receive but few Messages, and so far as we recollect we have no great ground for complaint.		
" Volkart, Brothers ...	33	Names several times mis-spelt ...	None as far as we remember, but recently the delays have been great.
" Mackindoe, Rogers and Co. ...	5	None.	None.
" Campbell, Mitchell and Co. ...	9	"	"
" Robinson and Co. ...	35	All pretty correct.	"
Peninsular and Oriental Steam Navigation Company ...	A great number—no record kept ...	None.	"
Commercial Bank of India ...	Of the period enquired about we would not complain, but since the 30th April the delays have been very frequent; one Message from Calcutta of the other day took nine days to come across.		
Chartered Bank of India, Australia, and China ...	.....	Many—especially from Calcutta ...	Three or four within last week.
Agra and United Service Bank ...	No return ...	None.	None.

From W. R. ARBUTHNOT, Esquire, Chairman of the Madras Chamber of Commerce, to W. GREY, Esquire, Secretary to the Government of India, Home Department,—Dated Madras, the 7th August 1861.

I HAVE the honor, on behalf of the Madras Chamber of Commerce, to acknowledge the receipt of your letter of the 12th June, in which you apply to the Chamber for its opinion as to the general efficiency of the Electric Telegraph for commercial purposes, and you request that it will furnish a Statement of the total number of Messages sent or received during a given period, say from a week to a month previous to the date of your letter, by any Firms or Establishments connected with the Chamber, shewing what proportion of them was delivered with reasonable punctuality and correctness, and in what proportion any delay or error occurred so material as to detract from the commercial value of this means of communication. You further state, by desire of His Excellency the Governor General in Council, that if the Chamber have any suggestions to offer for the improvement of the Telegraph Department, the Government will be glad to receive them.

I regret that I have been unable to procure the statistics for which you apply, the mercantile Firms at this place not having anticipated the enquiry that has been instituted, and having kept, therefore, no separate record of the Messages received and despatched by them. In the hope, however, that the information may still be useful, I have requested the Members of the Chamber to record day by day their experience of the working of the Department for the current month of August, which I hope to do myself the honor of forwarding to you early in September.

The opinion of the Madras Chamber upon the general efficiency of the Electric Telegraph for commercial purposes is on the whole favorable.

Messages are occasionally delivered in language more or less mutilated, and for the deciphering of which the context would of itself be insufficient without a pre-acquaintance on the part of the recipient with the subject matter. Errors, too, arising from evident inattention of the Signallers, but which might be productive of serious consequences, such as the substitution of the word "hundred" for "thousand," "four" for "five," and *vice versa*, sometimes occur. Still, however, I have pleasure in repeating that, upon the whole, as far as I have been able to ascertain the views of the Madras Chamber, the Department has given satisfaction, and in this Presidency we have had no complaints of the Messages being tampered with. Of the irregularities that do occur I may confidently state that a large preponderance would be found in the Messages transmitted from Calcutta and Bombay, while the Southern and South-Western Lines have been comparatively free from them. I have also grounds for believing that the Messages sent from hence to Calcutta would be considerably more numerous than they are were it not for a want of confidence which, to a certain extent, prevails in regard to the prompt receipt of the reply Telegrams.

The frequent interruption of the North Coast and Calcutta Line has been felt to be one very serious drawback to its satisfactory working. On a late occasion the interruption extended over a period of a week, if not ten days, and this of necessity occasioned very great inconvenience.

Whatever may have been the causes in times past of such long continued interruptions, it is hoped that a remedy, prompt and effectual, may be applied.

Believing that the expediency of Telegraph Stations being opened at every important Commercial Port along the Coast has been fully recognized, the Chamber would take this occasion to bring to the notice of the Government that Cuddalore, the chief Station of one of the most important Collectorates in this Presidency, and through which the Telegraph wires are already carried, is still deprived of the advantage referred to.

There are two other practical suggestions with which I will conclude. They are as follows :—

1st.—That the date and hour of despatch of a Telegraphic Message be included, if required, free of expense to the sender.

2ndly.—That in the case of Messages delivered in an unintelligible shape, a refund be allowed, even though the repeating charge may not have been paid. The public at present has no redress unless the higher charge has been levied, and the tendency of this arrangement is to make the Signallers careless in the case of ordinary Messages.

From H. W. J. WOOD, Esquire, Secretary, Bengal Chamber of Commerce, to W. GREY, Esquire, Secretary to the Government of India, Home Department,—Dated the 14th August 1861.

I HAVE the honor to acknowledge the receipt of your letter No. 1168 of the 12th June, relative to the Telegraph Department, which has been circulated very generally among the Commercial Establishments of Calcutta ; and I am directed by the Committee of the Chamber of Commerce to submit the following observations for the consideration of His Excellency the Governor General in Council :—

The Committee consider that the Electric Telegraph Service of India is deficient in the two great points which can alone render it valuable either to the Government or the Commerce of the country, namely, despatch and accuracy in transmission. The Committee can only speak practically as regards the latter, and in support of their opinion they append, for the information of His Excellency the Governor General in Council, the opinions of the most of the leading Merchants of Calcutta upon this subject. It is not easy to understand why the working of this Service should not have improved during the six or seven years which have passed since it was first opened to the Public ; but with some exceptions the Committee, from every-day experience, believe such to be the case. They are well aware that the superior Officers in charge of the Service are men of ability and zealous for its efficient execution ; but in consequence of what the Committee believe to be the cause of the present unsatisfactory working of the system, namely, defective construction and bad organization, the exertions of these gentlemen are neutralized, and but of little value to the Public. The Committee are of opinion that, if the construction of the Line had been entrusted to persons thoroughly conversant

with the European system, and not to men who, as far as this particular system was concerned, were mere theorists, the chief defects now evident would have been avoided. Can it be expected that the Telegraphic communication for all India can be maintained with any thing like correctness or despatch when the means of transmission is limited to the use of a single wire?—and when this wire is employed by Government for many hours, as it frequently is, private Messages must necessarily be detained, and their correctness endangered by the delay.

As regards the gross errors which so frequently occur in the Messages the Committee believe they are to be attributed to the mistaken policy on the part of the Authorities who, for economical reasons, have thought proper to employ, at low salaries, as Signallers and Copyists, persons, chiefly Natives and Eurasians, whose want of education and proper training renders them unfit for the appointments which they hold. The Committee are also informed that the Inspectors employed are not sufficiently numerous to keep up an efficient supervision of the several Lines in work.

It is generally believed by men practically acquainted with the working of the European system, an opinion in which the Committee fully concur, that Telegraphic communication in India would be worked more satisfactorily and profitably to the Government and the Public if it was entrusted to private enterprise, for which capital could readily be found in England.

Extracts from the Opinions of the several leading Merchants of Calcutta.

In reply to your letter of the 18th instant, we beg to say that the first thing required, in our opinion, for the improvement of the Telegraph Department is that the Superintendent should be ordered to be present in some part of the Establishment whence he can superintend its working, and where he will be accessible to the Public. Major Douglas at present sits in a room at the top of a three-storied house—the whole working of the Telegraph is carried on below on the ground floor. It is manifest, therefore, that he cannot be the least aware of the manner in which the work is done. On your wishing to have access to Major Douglas on business (*sic.*) is compelled to give a card to a Peon at the bottom of the stairs, who carries it up to Major Douglas, and in time returns with permission to climb to the top of the house: this time being generally from ten to fifteen minutes, during which the victim has to walk about a dark damp passage without even any thing to sit down upon.

It appears to us that the work of a Telegraph Office is, of all others, one which requires constant superintendence and appropriate accommodation, without which no good system can possibly be carried out. We should, before any other change, recommend that a convenient Telegraph Office be at once provided by Government, without which the work can never be efficiently performed.

In reply to your Circular regarding the Electric Telegraph, we beg to record our opinion that the two leading faults of which the Mercantile community have a right

to complain are frequent delays in the transmission of Messages, and an extraordinary want of intelligence on the part of those who reduce them to writing.

In a few Messages which we lately exchanged with a Firm at Madras we find the following absurd blunders:—

Hydrabhay for hydraulic.
Containing for contain.
Publication for application.
Ball for bale.
Celling for calling.
And thirtieth for thirteenth.

These six errors occurred in four Messages.

With regard to the efficiency of the Telegraph for commercial purposes we think that, as it is at present managed, a Merchant incurs a grave responsibility who acts upon any Telegram the purport of which does not tally with his pre-conceived notions, or, in other words, that if a Message reports an unexpected high or low rate of prices, it is probably a blunder of the Telegraph, and cannot safely be acted upon.

With reference to your Circular dated 15th June, I beg to say I have no evidence to give of the working of the Telegraph Department for the time for which Government require it, *viz.*, from a week to a month previous to 12th June; but former experience warrants my joining in what I believe to be the general opinion, that the Telegraphic Department has been culpable of gross neglect.

That the system of Telegraphic communication in India has not improved as regards the correctness of the Messages and the time occupied in their delivery during the last five years is a fact to which, I believe, the Public will generally bear testimony. The Merchants and Bankers certainly will.

The experience of one month in the year hardly conveys an adequate idea of the almost daily blunders which occur in the transmission of Messages on all the Lines, especially those received from Bombay and Madras, blunders which are liable to cause losses of great magnitude to the persons sending or receiving the Telegrams. The following is an instance of this, but other facts could be adduced in which the errors were more numerous. I can only speak positively to the Messages received, but there have been complaints from Bombay in regard to those despatched:—

17th May to 17th June.

Messages to and from Bombay and Galle—21 received and 17 despatched.

On the 16th, from Galle, *hundreds* were quoted instead of *thousands* of ounces.

On the 29th, from Bombay, unintelligible on 11th June, six days en route, and quite incorrect.

On 15th June ditto ditto.

Four out of those received were not only useless, but in the instance of one Message we had a narrow escape of serious loss,—as though the Message received was found, when compared with original received from Bombay, incorrect, yet the sentence was so connected as to remove any doubt of its correctness when received; luckily a later Message was received the same day which led me to doubt the accuracy of the first.

We shall be obliged by your submitting, for the information of the Chamber, the following case of imposition, for we consider it nothing less, on the part of the Electric Telegraph Office :—

We received this morning a Bill of Rupees 7-5-0 for a Message alleged to have been sent to our address from Bombay. The number of the Message not appearing on the face of the Bill as usual, we returned it with a memorandum requesting the information, and were informed in reply that “the Message did not reach Calcutta.” We then asked why we were called upon to pay for it, and were again informed in reply that “the Message was duly sent from Bombay, but appears to have been lost on the road?” Our only course was to pay the Bill, which we have done, and now enclose it and the memorandum for your inspection.

We make constant use of the wires in directions, and, taking last month as a criterion, receive or send on the average sixty-four Messages monthly, each ranging in length from 16 to 100 words, in many of which errors to a greater or lesser extent occur; but on the whole we are satisfied with their general accuracy.

We therefore confine our complaints to the following, received within the last few days, which we have brought to the notice of the Telegraph Officials without obtaining a satisfactory explanation of the cause of the blunders made in transmission :—

A Message by letter from Mauritius, and correctly given for transmission by our Agents in Galle, quoted a certain staple export *four* dollars per bag, but in the Telegraph Message it is given as *five* dollars per bag. We are aware that a neighbouring Firm received a similar Message in which the same error occurred, and we cannot regard this error otherwise than a wilful one on the part of some in the employ of the Telegraph.

A Message transmitted from London by letter to Bombay gives us a limit of *two* thousand pounds, which is delivered to us as *one* thousand, and the only satisfaction we can obtain is the same as given in the former case.

Attention ought to be called to the state of the Lines between Calcutta, Akyab, and Rangoon, and to the alleged fact that between this and Jessore the wires are suspended on slim bamboo poles which give way in every storm. This Line has been virtually closed for months past through constant interruption.

Our experience of its operations has led us to the conclusion that, for commercial purposes, it is not of the least use as at present conducted. The two great essentials to render it valuable to commerce being wanting, *viz.*, certainty of transmission within a proper time, and the correct delivery of Messages. We have found that Messages

by Telegraph have frequently reached their destination only a few hours before the copy of the same by Post, and sometimes not until after the copy by Post had been delivered. And frequently Messages are so distorted and rendered unintelligible that they are not of the least use when received.

For these reasons we have not of late made use of the Telegraph as a means of communication, trusting, in preference, to the slower but more certain delivery of Messages by the Post.

We do get a few Telegraph communications occasionally ; but we have *never yet received one* that was of any use to us, being either totally unintelligible, or utterly useless from being “too long on the road,” generally *both together*.

Our Messages are very often too late and behind time. We had several Messages from Akyab when the cable was *in order*, which occupied from eight to nine days !

We have continual causes of complaint for mistakes and omissions in telegraphing our Steamers, and have recently, on more than one occasion, brought them officially to the notice of Major Douglas, but without effecting any reform. On a recent occasion also our Madras Agents telegraphed to us, prepaying for our reply. Our Clerk, through inadvertence, paid here for our reply, and on pointing out the double payment and demanding a refund, Major Douglas, on the 11th June, informed us he could make no refund here.

We have a very unsatisfactory account to give of our Telegrams. They are *often late*, sometimes missing, and rarely correct.

We have had frequent cause of complaint.

Our experience leads us to place little or no confidence in the Telegraph Office as a means of transmitting Messages.

The Messages we receive are frequently unintelligible, particularly those from Galle. We think that if the hour of despatch was stated in the Messages, it would be an improvement and a wholesome check to irregularities.

We do not think that the Electric Telegraph Department can be considered as “efficient for commercial purposes” as it ought to be, and as it might be made, and there is still a sufficient amount of *uncertainty* about the receipt and transmission of Messages as to prevent its being used as much as it otherwise could be, and to constitute a great drawback on its usefulness. It is not nearly so well conducted as in England or America, where mistakes and delays are rare indeed, and though in India it probably never will attain to the same degree of efficiency as in those countries, we think it is much more behind-hand than it ought to be.

At the same time we are far from thinking it as inefficient as many may probably suppose it to be from the way in which it is abused in the Newspapers, and from the cases there given (no doubt correctly) where it has failed ; these cases of *failure* attract attention, but when all goes on well, no notice is taken.

We have referred to our accounts and find that in 1861 we have sent Telegrams to Ceylon 19, Bombay 7, Madras 5, Mirzapore and other places in India 9, Melbourne, via Galle 6, London 10 = 56 in all. These are Telegrams the result of which we know. We may have received about half the above number, and the result is that the Telegrams have generally been sent and received pretty fairly in point of time, and that the words have come generally accurate enough to be intelligible, in most cases very nearly correct, and in a good many cases quite correct. Some Lines appear to be served much better than others, for instance, Calcutta to Colombo, we have sent nineteen Messages, and received twenty in reply, and they were mostly in good time, and nearly all correct; probably this may be partly owing to the fact that all were to the same house and all on the same subject. When delays and mistakes have occurred in this and former years we have generally found them to be where we have parties telegraphed to for the first time or upon new subjects. For two years we have been sending Messages to a house in London always on same subject, and they always reach regularly and correctly. Lately we sent to Bombay, for London, three Telegrams at same time, one to this house, and two to new houses. Anticipating difficulty we had written in the beginning of the year to Superintendents at Bombay and Galle, and sent lists of all houses in England to whom we expected to telegraph, in order that there might be means of correcting mistakes in names. Notwithstanding this our Telegram to the *old* correspondent arrived correctly, but those to the *new* ones only reached a fortnight later and were of no value. Recently we had a Message six days coming from Bombay, and one was sent from Mirzapore and has never been received by us at all. With these three exceptions we have no special cases of complaint, but in all three it appears to us that there must have been great carelessness.

Where Messages are *incorrect* it seems generally to arise from want of intelligence on the part of some of the employés of the Department. We make allowance for mistakes in case of new and difficult matters, but such *stupid* blunders are sometimes made as would seem to shew that the parties making them can hardly understand the English language, such blunders as are never made in England, and which the possession of ordinary intelligence would avoid.

We have referred to our own private experience of the working of the Department, but we are all interested in Public news, and we think the Department is freely entitled to claim credit for the generally accurate despatch of Public news from England, China, &c., and of commercial advices to the Chamber of Commerce from England, Bombay, and China; in the *China* quotations, however, mistakes are made more frequently than they ought to do.

We do not use the Telegraph as much as we would do if it were more accurate, and we believe it might be made much more accurate by the employment of better men, and their better payment necessary to secure a better class. We believe the Department *pays a profit* at present, and if so, it would be only just to improve it: we believe it would pay well also to do it, as many more Messages would be sent. In cases of proved neglect, what is paid for Messages certainly ought to be refunded, and part, or the whole, of such refund should be deducted from the pay of the person in fault. Good

men should be employed, they should have good pay, and be told that they would lose part if they committed serious fault. This is the system in the Bank of England in the Cashier's Department, or used to be. The Clerks were paid "risk money;" if they over-paid a Cheque, or lost money in other ways, they were liable to make good the loss; if they made no mistakes, they kept the risk money. We think that if some such plan were tried here it would be well,—the good men would like it. At present it takes some time and trouble to write in with particulars of complaint, and all that is ever got is an expression of regret, the announcement that no money can be returned, an intimation that the culprit has been reprimanded. We have generally sent in complaints ourselves, but we know of others who do not, considering that it is only waste of time as well as of money.

In reply to your favor calling on us for an expression of our opinion as to the efficiency of the Electric Telegraph for commercial purposes, we regret to say that we have no great faith in the utility of the Department while under its present management, as through the frequent disappointments we have met with in consequence of the delay, or unintelligible state of our Messages, we have almost ceased to make use of this means of communication, of which we would gladly and frequently avail had we any assurance that we could do so with the certainty that our Messages would meet with even ordinary care in transmission. As it is, we are doubtful of the expediency of paying heavily for Messages with a great chance of their mis-carrying, or which may be delivered at a time not only to be of no use, but possibly of harm, as the features of the matter of which they treated may have altered. We have suffered considerably ourselves by the length of time our Telegraphs to Akyab, Galle, and other places have been in transit, and we have been put to much inconvenience lately by a Message from Galle to our address not having reached us until five days after its date, and then in an unintelligible form. It ran thus:—"*Muster for Leeds, no shillings for Graham.*" The Superintendent refused to ask for a repetition, though the wording in its present form is meaningless, and has no reference to our business; and when we inquired if we must pay for this worthless affair, the reply was, that "if you do not pay, you will never receive another bearing Message." In answer to our complaints to the Superintendent here we have generally been sent printed circulars, giving us no satisfaction or explanation whatever.

Not only in the working of the Telegraph itself, but in the commonest details of the Office, the greatest carelessness seems to exist, for so late as yesterday we received a letter addressed to us, enclosing a returned telegram intended for Messrs. Mackinnon, Mackenzie and Company, while that Firm were sent a Message intended for us.

In answer to your Circular letter of date 25th instant, wishing our opinion with regard to the efficiency of the Electric Telegraph for commercial purposes, we have to state that our own experience of the irregularity and incorrectness with which very many of our Messages have been forwarded has caused us to conclude that this Department of Government has been inefficiently wrought. Not a few of our intended Telegrams never reached their destination; and the same applies to Messages intended for

us from other Stations. Many were incorrectly forwarded, leaving the receivers only to guess at the meaning, and some were quite unintelligible.

Regarding the punctuality and correctness in the transmission of Messages by the Electric Telegraph we have to bring to the notice of the Chamber that a Message from London, despatched from Bombay on the 9th instant, reached us only yesterday evening, taking nine days for transmission; while the copy of the above Message came to hand yesterday morning by the usual Bombay Mail.

On several occasions we had to complain of the general management of the Telegraph Office for irregularities; we have always been told by the Officials that we have to make our complaint either to Galle or Bombay, as the fault was never with them, threatening to stop all our Messages if we did not pay for those that either we were overcharged for, or they came in an unintelligible language.

<i>Despatched from Calcutta</i>	<i>Per Steamer.</i>	<i>Leaving Galle.</i>	<i>Reached Galle</i>	<i>No. of days' transmission.</i>	<i>Remarks.</i>
25th May 1861	about June 1st	.	June 3rd	4	Too late.
10th June "	" " 12th	Bombay	.	...	Refused, because the Line was interrupted.
<i>Received in Calcutta.</i>	<i>Despatched from Bombay.</i>		<i>Transmission.</i>		<i>Remarks.</i>
1st June 1861	...	30th May	...	2 days	We have seldom received an English Mail Mes- sage in less time.
18th " "	...	8th June	...	10 "	This Message took the same time as the Ex- press letter which it was intended to anti- cipate.

We have not tried the Electric Telegraph much of late, because of the unsatisfactoriness of the working of it. Above is a note of our latest Messages and their result.

We have had frequent cause of complaint regarding our Messages from Saugor and Galle, those from the latter Station being frequently twenty-four hours and more behind the last of the public news. We have also had to complain that the rule which provides for private Messages being sent off in the order in which they are tendered is apparently little regarded in the Galle Office, and our experience of correspondence with the Department for redress of grievances (even when made in the most specific form) is most unsatisfactory. The compulsory insertion in a Telegram of the date and hour at which it was despatched would, we think, be a practical benefit, and be generally acceptable even if adding slightly to the cost of the same.

We receive Messages from Bombay on arrival of every Mail, which occupy three or four days in reaching us, besides receiving and sending Messages from and to Bombay and other places very often. With one or two exceptions they never have reached their destination at the time they should have done so, and sometimes Messages that have been sent have never reached at all. We complained at first, but never got any satisfaction, and of late have kept no record.

From W. R. ARBUTHNOT, Esquire, Chairman, Chamber of Commerce, to W. GRAY, Esquire, Secretary to the Government of India, Home Department,—Dated Madras, the 7th October 1861.

WITH reference to my letter of the 7th August, I have now the honor to annex a Return of Telegraphic Messages received and despatched during the month of August, as furnished to me by three Establishments—two of them Houses of Business, the third a Joint Stock Bank.

Return of Telegraphic Messages.

Messages received in August 133

Of that number one Message from Akyab came to hand in an unintelligible shape and with figures altered and mutilated. Another from Rangoon was also scarcely intelligible, and two more contained trifling errors.

Messages despatched 139

The fate of these Messages is thus reported:—

Never delivered 2

Of which one was addressed to Kamptee and another to Tuticorin.

Serious and unexplained delay 1

The above was a Message despatched, 30th August, to Kamptee, but not delivered till 6th September.

Unremarked upon and therefore presumed to have been duly delivered ... 136

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to W. GRAY, Esquire, Secretary to the Government of India, Home Department,—Dated the 9th November 1861.

REPLYING to your No. 1800 of the 28th September last, forwarding copies of communications from the Chamber of Commerce at Calcutta, Madras, and Bombay, and requesting my opinion on the propositions contained in them for the general improvement of the Department, and whether I consider there is any Line which could, as an experimental measure, be conveniently entrusted to a private Company.

2. In the letter from the Calcutta Chamber there is no definite proposition made. The allusion to the indifferent working, which the Chamber anticipate will continue so long as a single wire is the only means of communication, points to the desirability of employing a greater number. I have already alluded to the advantages to be derived from a second Line to Bombay in my No. 1526 of 12th September 1861, and the earliest opportunity will be taken, on the arrival of the new insulators, which, it is understood, are on their way from England, to report upon their efficiency or otherwise for insulating a double set of wires on the same supports in view to the sanction of Government being obtained to the employment of an additional wire on the Bombay Line.

3. The Calcutta Chamber attribute the “gross errors which so frequently occur in the Messages” to the employment of Natives and Eurasians. From the evidence of the Complaint Office I do not consider that gross errors are frequent as compared with the

number of Messages transmitted, which, during the past official year, were 2,40,451, exclusive of those on Departmental service. The complaints regarding errors only, during the same period, were 139, and this, although any obstacles that may have been supposed by the public to exist to redress in such matters, may fairly be considered to have been removed since the establishment of the General Complaint Office in 1860, and which was in efficient operation during the entire period alluded to by the Chamber. In justice to the Signallers I must remark that, in consequence of the absence of insulation, and the difficulties resulting from the great distances between contiguous Offices, communication is sometimes only possible with Signallers skilled to recognize a word from two or three of its letters, and in this way correspondence has frequently to be carried on during the rains. Of course this is only possible with the best Signallers.

4. Among the complaints in the extract from the opinions of the leading Merchants of Calcutta, brought prominently forward as examples, I notice that four refer to the changing of figures, and are as follows :—

Thirtieth	for	Thirteenth.
Hundreds	,,	Thousands.
Five	,,	Four.
One thousand	,,	Two thousand.

The liability of the Telegraph to mistakes of this nature is pointed out in Clause XVI of the Rules of the Department, and the means suggested to lessen the risk of errors in this particular are laid down for the guidance of senders of Messages, and where the recommendations there given have been acted upon, I have never known a single instance of error. The European public, although well aware that repetition is desirable for the correct transmission of numbers, persistently neglect the inexpensive insurance obtained by this method, or by giving the doubles or the halves, and I can only ascribe this to some such reason as that lately given to me by the Manager of a local Bank in conversation with reference to an error in numbers which had caused loss and inconvenience. It was to this effect :—That so few errors occurred in their unrepeatd Messages that they did not think it worth their while to pay for repetition. The only remedy for this state of things is for the Department, in justice to itself, to do what its customers decline doing, and to make it a rule that in all cases of proper names, numbers or words used in the abstract and without connection, and where no aid is consequently afforded by the context to the detection of error, that repetition of such words be given by the Department without charge. Some such rule is indispensable if the Department is to be held responsible for refund of the cost of all Messages in which errors are made. The Chamber allude, with reference to errors, to the "mistaken policy" of employing Natives and Eurasians. Without importing lads from England Natives and Eurasians must be employed. The mass of our Signallers are Eurasians, the sons of persons in humble circumstances, and doubtless many errors may be attributed to the limited education of these classes, from which alone, as a rule, the Signalling Branch of the Department has hitherto been recruited. Assuming that there is no intention of importing lads from England, I believe that a larger introduction of Native Signallers would be

an advantage. The recent experience of the Barrackpore Training School has shewn that the Natives who have presented themselves for admittance into the Department possess, as rule, a better knowledge of English than the class of Eurasians who usually seek employment in the Telegraph. Although the pay of the former on the scale lately introduced is only half that of the latter class, it has been found sufficient to obtain for the Barrackpore School all the Native Probationers that were required.

5. I consider the chief cause of error to be the youth of the mass of the Signalling portion of the Department, a consequence of the rapid extension of the Lines, and perhaps to carelessness resulting from dissatisfaction on the part of those employed, and consequent frequent resignations. I attribute this feeling to the late short-handed condition of the Department which led to excessive work, and also to the knowledge of the Signallers that, under such circumstances, their services could not be dispensed with. This knowledge led to insubordination, and its natural result, dismissal. Another cause of error is doubtless that to which I have before alluded, viz., the defective education of the classes from which the Signalling ranks are filled.

6. The number of lads that have been trained during the past season, by increasing the strength of the Officers, has rendered it possible to dismiss insubordinate Signallers, and as every Signaller now dismissed is debarred, by Departmental orders, from re-entering the Department, there is now more hesitation in leaving than was formerly the case.

7. Something may, however, be attributed to the method of receiving Messages by sound. Under circumstances otherwise similar I am inclined to the opinion that receiving by sound admits of at least equal accuracy to that of receiving by sight; but in the former, if a Signaller mistakes a word or hesitates as to its meaning while thinking what word should be put down, several others immediately following, as well as the word on which the doubt arose, will escape his attention, and will be put down inaccurately rather than let the course of the Message be interrupted, and this is especially the case when a junior and comparatively unskilled Signaller is receiving from an impatient and smart senior. In receiving by sound it also frequently happens that the Signaller, after receiving the first three or four letters, assumes the idea present in his mind as to what the word will be as correct, and neglects to notice any change in its termination. This is particularly the case with words ending in the plural number, and with such words as "battery," "repeated," "currency," which are liable to be changed into "battalion," "repealed," and "currently," and to any others with similar terminations. There was this great disadvantage in receiving by sight from the original Morse instrument, viz., that the signs were not colored as in ordinary writing, but were merely embossed impressions on plain white paper which were at no time very legible, and were frequently almost illegible, either from the light being bad, or from its not falling in the required direction, or from the difficulties which the adjustment of the apparatus necessary for the production of clear indentations offered to Signallers; nevertheless, even under these disadvantages, the system of reading from the embossed tape does appear to have secured greater accuracy than receiving by ear, a result ascribable to the circumstance that under the former plan the receiver need not have the capacity of receiving

as smartly as the transmitter that of sending, as the Message, on being written down, could be read at leisure. The re-introduction of the system of reading by eye would, I consider, with the present instruments, be impracticable, as I feel convinced that the loud click of the apparatus would have the same effect on the Signaller accustomed to receive by ear who attempted to copy from the tape as that of a person speaking in the hearing of another writing. The introduction, however, of the new French instruments, the click of the armature of which is nearly inaudible, and by which the Message is written down on paper in a black pigment, will, I have reason to hope, lead to greater accuracy than hitherto, and this the more so as our Establishment is so very largely composed of recently admitted and half-trained lads with whom correct receiving by ear is still a matter of difficulty. It must not, however, be supposed that by any system not purely and entirely mechanical error can be entirely avoided. At each Station at which the Message has of necessity to be repeated, whether it be received by eye or ear, it must be written down in ordinary characters on paper, and errors arise both in this writing down and in the reading of what is written by the Signaller who has the duty of sending it on. A double line would materially contribute to reduce this class of error by permitting the exclusive use of one line for through Messages only, thereby diminishing the number of repeating Stations, and reducing the proportion of error from the causes just referred to

8. The Madras Chamber make two propositions:—

1st.—“That the date and hour of despatch of a Telegraphic Message be included, if required, free of expense to the sender.

2nd.—“That in the case of Messages delivered in an unintelligible shape, a refund be allowed even though the repeating charge may not have been paid.”

9. The first proposition is already in force with regard to Service Messages, and I have for some time had a proposal in view to extend the arrangement to private Messages by charging for every word in the address instead of only for certain words as at present, and giving the date free in every instance.

10. Regarding the second proposal, I consider that the present repetition charge is heavy, and that both it and the night charge might be reduced, the former to 50 per cent., and the latter to 25 per cent. upon the ordinary Message, instead 100 per cent. as they both are at present. If the Government desire, I will offer no objection to the proposal to give refunds for errors on unrepeatd Messages being experimentally introduced, limiting the refund to that portion of the Message rendered unintelligible, and to cases in which it is clear that the portion has been rendered worthless by the error. This principle of partial refund on repetition Messages has lately been introduced in consequence of its having been found that persons have not scrupled to claim refund for the whole value of a Message in which a single word only had been erroneously transmitted. If the concession in the charge for repetition and night charge above suggested be approved, I think that the proposal to give refunds on other than repeated Messages might, for the present, be held in abeyance.

11. The proposal of the Bombay Chamber has reference to the late frauds in that Presidency. As the recent cases are the first which are known to have occurred since the establishment of the Telegraph in 1855, it does not appear to me desirable to appoint "a Secret Committee, under the guidance of an experienced Officer trained in England," in view to bringing the real authors of these frauds to justice, more especially as they appear to be well known, and a want of evidence alone prevented their being brought to trial at the time of Pectall and Allen's conviction.

12. With reference to the concluding paragraph of your letter, the Bengal Chamber are of opinion that "Telegraphic communication in India would be worked more satisfactorily and profitably to the Government and the Public if it was entrusted to private enterprize." In no part of the world, with the exception of England and America, are the lines of Telegraph in private hands; and I do not consider that a mixed ownership of the system of lines on the Continent of India would be at all satisfactory either to the proprietors or the public. There are already several lines of Telegraph in private hands, I allude to those of the several Railway Companies which have power to transmit private Messages in all cases where the Government have no co-ordinate lines. Should, however, other private Companies desire to undertake Telegraph management, there is no line which could be so conveniently made over to them as that connecting Calcutta with Rangoon and the local lines in that Province. These Lines, connecting three very important places of commerce, Calcutta, Akyab, and Rangoon, with the advantages of possible extension to the Port of Moulineau, appear to hold out every prospect of being remunerative; and the fact of the Telegraph lines in Pegu being very largely used in official correspondence, owing to the tardiness of Postal communication, offers additional prospect of profit. Should the Government decide on such a transfer, I think it as well to mention that the Offices are being weeded of unfit Signallers, and provided with the best Instruments, and I have little doubt but that by the end of the year both Establishments, Instruments, and Lines will be in good order, and the business of the lines ready for immediate transfer to a private Company. I may add that a line on which I have been requested by the Bengal Government to report, *viz.*, an extension of the Calcutta and South-Eastern Railway Telegraph from the Port of the Mutlah to the mouth of that river, might also, if decided on, be advantageously transferred to a private Company.

Of the Lines and Offices in India generally some (I may instance those hence to Bombay) are much more than self-supporting. There are others, however, which can expect no business except that derived from the Government. There are lines established for political objects only, such as that from Lahore to Peshawur. The value of the political services rendered by these lines may be considered by the Government as an equivalent for their cost, but no returns they are likely to yield at any early date would offer any encouragement to a private Company to be connected with them.

I assume that the reasons which might incline the Government to make over a portion of the lines to a private Company are, that such an arrangement would secure a more honest and economical administration than it is in the power of the Government

to command. I do not believe there are any grounds for expecting either result. The English Telegraphs are not free from the imputation of dishonest trafficking with the news committed to them for transmission, and the history of English Railways and other Joint Stock Associations, both in England and other countries, I think, proves that while business, if within the compass of a single individual, is, as a rule, much more economically conducted than it ever could be by Government, there is no reason for believing that where the extent of the business requires the resources of a Company for its management, its administration would, in any respect, be more efficient, or more economical than if under the management of the Government.

From W. GREY, Esquire, Secretary to the Government of India, Home Department, to H. W. J. Wood, Esquire, Secretary to the Bengal Chamber of Commerce,—Dated the 15th January 1862.

I AM directed to acknowledge the receipt of your letter dated the 14th of August last, replying to my communication No. 1168, dated the 12th of June.

2. The Chamber was requested, in my letter of June, to favor the Government with their general opinion as to the efficiency of the Electric Telegraph for commercial purposes, and to furnish a Statement of the total number of Messages sent or received, during a given period, by any Firm or Establishment connected with the Chamber, shewing what proportion of them were delivered with reasonable punctuality and correctness, and in what proportion any delay or error occurred so material as to detract from the commercial value of this means of communication. It was intimated also that the Government would be glad to receive any suggestions the Chamber might have to offer for the improvement of the Telegraph.

3. The Chamber, it is presumed, has been unable to furnish the Statement of Messages which the Government asked for, as no such Statement accompanied your letter, or has been received since.

4. The Committee of the Chamber, in reply to the request for their general opinion as to the efficiency of the Telegraph Department, state that they consider the Department deficient in despatch and accuracy, though they add they can only speak practically as regards the latter. In support of their view on that point extracts from the opinions of several leading Merchants of Calcutta are submitted with your letter.

5. The Committee observe that they believe the unsatisfactory working of the Department to be owing to "defective construction and bad organization," and they express an opinion that if the construction had been entrusted to persons conversant with the European system, and not to mere theorists, "the chief defects now evident would have been avoided." The defects of construction here alluded to are not specified in your letter. It is urged, however, and perhaps this is meant as an instance of defective construction, that neither correctness nor despatch can be expected when the means of transmission are limited to a single wire.

6. With regard to the organization of the Department, the Committee comment on "the mistaken policy on the part of the Authorities who, for economical reasons,

have thought proper to employ, on low salaries, as Signallers and Copyists, persons, chiefly Natives and Eurasians, whose want of education and proper training renders them unfit for the appointments which they hold." The Committee add that they have also been informed that the Inspectors are not sufficiently numerous to keep up an efficient supervision of the lines.

7. Lastly, the Committee state their opinion that "Telegraphic communication in India would be worked more satisfactorily and profitably to the Government and the Public if it were entrusted to private enterprise, for which capital could readily be found in England.

8. Your letter and its enclosure, as well as the replies received from the Madras and Bombay Chambers of Commerce to a similar communication addressed to them by Government on the same date as that abovementioned to the Bengal Chamber of Commerce, have been communicated to the Director General of Telegraphs, and that Officer has furnished a Report on the subject, a copy of which, and of the replies received from the Chambers of Commerce at Madras and Bombay, I am directed to transmit for the information of the Chamber, and at the same time to communicate the conclusions of the Governor General in Council on the several points discussed in the correspondence.

9. It has for some time been in contemplation to put up a second wire on the line between Calcutta and Bombay; but the Governor General in Council is quite prepared to sanction the construction of an independent Telegraph on that line (which, of all others, presents the most likely prospect of a remunerative business) by a private Company if any persons are willing to undertake it. Six months, it is presumed, is sufficient time to allow for the formation of such a Company, and if within that time measures are seriously taken for effecting the object in view by private enterprise, the Government will abstain from putting up a second wire, and will promise not to compete with any private line in that direction by reducing below the present rates,—or below the rates adopted by the Company if they should be lower than the present rates,—the charge made on Messages between Calcutta and Bombay, or between any two places at which Offices connected with the private line may be established.

10. It must be understood, however, that the license to be granted for the erection of a private line of Telegraph between Calcutta and Bombay would include a condition enabling the Government, whenever necessary, to claim priority of transmission for all public Messages at the same rate of payment as that charged to the Public generally. Subject to this condition there would be no objection made by the Government to the construction of private lines of Telegraph in any direction from one part of India to another.

11. The Governor General in Council is not prepared to make over to any private Company or individual any Government line of Telegraph already existing or projected because he thinks it of the greatest importance that at least one medium of Telegraphic communication between all the most important places in India should be in the hands of the Government, and entirely under the control of its own Officers. His Excellency in Council thinks, too, adverting to the suggestion made by Colonel Douglas in the

11th paragraph of his letter, that it would be inconvenient to make over either the Hooghly or the Mutlah River lines to a private Company, as these lines are chiefly occupied with Messages relating to the business of the Port. Should it be thought, however, that, exclusive of this business, there is sufficient correspondence to occupy a second line, there will of course be no objection to the construction of such a line by a private Company.

12. With regard to the employment of a different class of Signallers on the Government Lines, and especially with regard to the substitution of European for Eurasian and Native agency, I am directed to call the attention of the Chamber to the remarks made by the Director General in paragraphs 3 to 6 of his letter, and to observe that, while it is impossible, without reckless extravagance and an entire disregard for the fair claims of all classes to public employment for which they are qualified, to substitute Europeans for Eurasians and Natives as Signallers in all parts of the country; it is also certain that, for the mere business of signalling, Natives of India are as apt as any other class, and that under proper supervision they perform the duty as well as Europeans. For the higher situations in the Department it has been, and will continue to be, the object of the Government to avail itself of European agency as far as possible, and the Director General will be authorized to employ trained European Signallers in the principal Offices where the extent and nature of the business require the presence of men of higher education, and possessing other qualities in which, generally speaking, the Natives of India are found to be deficient. Natives are largely employed as Signallers on the Railway Telegraphs, and it is certain that no private Company could hope to make a line of Electric Telegraph in India profitable as a commercial enterprise if it were to employ European Signallers exclusively, or even to any great extent.

13. The training of Signallers in India, so as to secure a constant supply of qualified persons, is an object which has engaged the careful attention both of Colonel Douglas and his predecessor, and it is one of which the importance, I am instructed to state, will not at any time be lost sight of. It may be confidently expected that as the supply of qualified Native probationers becomes fully equal to the great and increasing demand for their services, a result which the present rates of pay and prospects of promotion seem likely soon to accomplish, instances of inaccuracy and want of despatch, so far as they are attributable to defective agency, though impossible, under any circumstances, entirely to prevent, will be reduced to a minimum.

14. The Chamber will observe, from the 3rd paragraph of Colonel Douglas's report, that the absence of insulation of the wires is referred to as one of the difficulties to be contended with in India in the correct transmission of Messages. The question of insulation, I am directed to state, will be brought to a practical test as soon as the new insulators, now expected from England, arrive.

15. The Governor General in Council is desirous that it should be brought prominently to the notice of the Chamber that it is almost exclusively in the case of unreported

Messages that any cause of complaint arises, and that where repetition is resorted to, mistakes do not occur. His Excellency in Council has now resolved, in accordance with the suggestion made by the Madras Chamber of Commerce, to allow refunds on unrepeatd Messages on the same conditions as those on which refunds are given in the case of repeated Messages, with the further proviso that no refund will be given for any error in an unrepeatd Message arising from wrong figures being given, unless the precaution advised in the 16th No.* of the Telegraph Rules shall have been adopted.

* The errors which chiefly occur are in the numerals, such as *sixteen sixty*, *thirteen thirty*, owing to the sound and first three or four letters being similar. To obviate this it is recommended that in all financial or money messages the sum be given in two forms, halving or doubling the amount, thus, "Pay to my order Rupees 500 or half 1,000. When this is done, an error is of very rare occurrence.

16. With reference to the suggestion contained in the 9th paragraph of the Director General's letter, that the repetition charge should be reduced from 100 per cent. to 50 per cent. extra, I am to observe that this reduction has been already carried out, repetition being now charged for at half price only, or 50 per cent. extra. The Governor General in Council sees no sufficient reason for reducing the night charge, which is also suggested by Colonel Douglas in paragraph 9 of his Report, this charge being made on a wholly different principle from that on which the repetition charge rests.

17. In modification of the proposal made by the Madras Chamber of Commerce, the date and hour of despatch *from the Telegraph Office* will in future be inserted on every Message, free of expense to the sender, without any alteration in the present mode of charging for the address. The senders may still continue to date their Messages if they please, but the sender's date, if inserted, will be charged for as at present.

18. On the whole, the Governor General in Council thinks it must be admitted by the Chamber that, considering the disadvantages under which the Indian Telegraph labors, especially the difficulty of obtaining a sufficient and constant supply of properly trained and qualified Signallers, and the system of non-insulation† which has been bequeathed to it under a belief that insulation in India was practically unattainable, its general efficiency, as the Madras Chamber of Commerce observes, is favorable. Out of 240,451 Messages conveyed in 1860-61 only one hundred and thirty-nine (139) were complained of as erroneous, a proportion which is .0575 per cent., or little more than $\frac{1}{2}$ per thousand; while of the Commercial Messages delivered in Bombay during April and May last 92 per cent. were received with reasonable punctuality and correctness, $5\frac{1}{2}$ per cent. with important errors or delays, and only $2\frac{1}{2}$ per cent. so delayed or mutilated as to be useless. And the statement furnished from Madras of Commercial Messages, received at and despatched from that place during August last, is, it will be seen, even more favorable. The Governor General in Council by no means concludes that 139 represents the real number of Messages in which mistakes occurred in 1860-61; but seeing that the Rules of the Department allow of refunds for repeated Messages delivered in an unintelligible state, and for all Messages in case of non-delivery or unjustifiable delay, it can hardly be denied that the proportion of complaints to the number of Messages despatched

† The annexed extract of a letter from Colonel Douglas regarding the difficulty experienced on uninsulated lines in wet weather has been subsequently communicated to the Chamber of Commerce.

does afford some criterion of the general efficiency of the Department. The statements regarding the Commercial Messages delivered in Bombay during April and May, and those received at and despatched from Madras during August, I am to observe, are derived from the Returns which the Bombay and Madras Chambers of Commerce have been good enough to furnish in compliance with the request contained in my Circular letter of the 12th of June last, and the testimony which they afford, therefore, to the fair efficiency of the Department cannot be doubted.

19. It is, however, freely and fully admitted by His Excellency in Council that there is great room for improvement, and that instances of Messages delayed, misdelivered, and inaccurately or unintelligibly rendered are of much more frequent occurrence than they ought to be. The Establishment has been recently re-organized

* Financial Resolution, dated 10th December 1861.

and placed on a better footing as regards pay and promotion,* and the Government relies upon Colonel Douglas and the higher Officers of the Department to use the utmost care and vigilance in preventing mistakes, to investigate thoroughly every complaint, to visit every instance of proved neglect with suitable punishment, and to endeavor unremittingly to make the Telegraph thoroughly efficient by promptly remedying such defects as can be corrected with the means at their disposal, and by suggesting to Government all other practicable measures required for the purpose.

Extract from a letter from Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India,—Dated the 3rd December 1861.

I WOULD wish to say a word here on the subject of imperfect communication and its causes. By imperfect communication is meant that owing either to the absence of insulation, or defective insulation, or to unfavorable weather, or, in the case of lines well insulated, to deposits of moisture on the insulating surfaces, resulting from an excessively damp state of the atmosphere, a loss of the electric current occurs, and it is found impossible to send to the distant station a current of strength sufficient to affect the receiving instruments there with that certainty necessary for uninterrupted correspondence. In such cases some of the dots and bars composing our letters, as it were, drop out, and the word of which they form a part is rendered unintelligible, or it may occur that from the same cause a letter becomes split up into two, producing similar confusion.

From the above it will be seen that imperfect communication is not limited to uninsulated lines; it may occur under certain circumstances of weather with those lines that are provided with even the best known means of insulation. In densely populated countries, where the distances between Telegraph Offices are short, this difficulty is overcome by employing large battery power; but over the enormous spans of the lines in India it is practically and theoretically demonstrable that no amount of battery power would be sufficient, under the circumstances I have mentioned, to force a current sufficiently strong for effectively working any instruments hitherto practically employed for Telegraph purpose.

The following Extracts from " Prescott's Theory and Practice of the Electric Telegraph," published in America in 1860, will illustrate the facts I have just stated: —

Extract No. 1.—" Upon a long Telegraphic circuit there is a constant tendency for the current upon the line to pass off into the earth, this passage of the current into the earth we call 'Escape.' There are no lines in the world, probably, certainly none in the United States, whose insulation is so perfect as not to be more or less affected by this escape. It is much greater during wet weather; but all lines are more or less affected at all times."

Extract No. 2.—" During very wet weather, however, unless the line be very well insulated, a great portion of the current escapes; and it sometimes happens that a battery of fifty cups of Grove can scarcely affect the armature of a sensitive electro-magnet at a distance of even one hundred miles, the remainder of the current escaping, a little at each pole, during this entire length of line."

Extract No. 3.—" It does not matter how perfect our apparatus is in other respects; if the insulation is defective, it is a constant source of annoyance, and causes, oftentimes, great loss of business. Much can be done by increasing the power of the batteries, and by distributing them along the line; still the disagreeable fact ought not to be withheld, that in rainy or foggy weather not one of our Telegraph Lines in this country is reliable, or, if they work at all, it is only from one short station to another, and that with much difficulty. But this is also the case in England, France, Germany, in a word, in every country where the Electric Telegraph has been introduced."

Extract No. 4.—" Our principal lines work very well during dry weather, when in fact scarcely any insulation beyond the dry poles is needed; but let a shower even come up and all the wires are seriously affected by escape."

" It is not an unfrequent occurrence, during the rainy season, for all communication between the important cities of New York and Boston by the wires to be suspended, notwithstanding there are no less than eight direct lines extending between the two places."

The above extracts will, I doubt not, be considered as authorizing the expectation that imperfect communication during severe rainy weather will be considered a sufficient explanation of the bad working of our uninsulated Indian Lines, which has been so frequently a cause of complaint during the past rainy season.

APPENDIX C.

Extract from the Proceedings of the Government of India, in the Financial Department,—

No. 14667, dated the 13th December 1861.

Extract from a letter from the Officiating Director General of Telegraphs in India,—No. 931, dated the 20th July 1861.

I FORWARD the annexed letters in original, being three separate references arising from the difficulty of obtaining medical aid for persons employed in this Department, and regarding which I have the honor to solicit the orders of Government—

1st.—The Telegraph Office at Agra being within the Cantonments at that Station, it appears from Mr. Walton's No. 4017, that the Civil Surgeon does not consider it his duty to attend, and on the ground that it becomes necessary for the Garrison Surgeon to render any medical aid that may be necessary, it is recommended by Dr. Murray, the Inspector General of Hospital, Agra Division, that an allowance of 30 Rupees per mensem should be sanctioned to provide for conveyance. I am aware of no precedent of this nature.

From the Principal Inspector General, Medical Department, to A. M. MONTEATH, Esquire, Under Secretary to Government of India, Home Department,—No. 810, dated the 24th September 1861.

IN reply to your letter No. 1435 of the 27th July last, I beg respectfully to state, for the information of His Excellency the Right Hon'ble the Governor General in Council, that a Civil Officer living within Cantonment boundaries, unless obliged to do so from the absolute want of a house in the Civil Station, cannot compel medical attendance upon him there by the Civil Surgeon, nor can he insist upon receiving professional aid permanently from the Military Officer in charge of the Staff Medical duties.

2. As regards the men of the Electric Telegraph Department, however, no rule has yet been passed; but it appears to me that where their duty requires them to reside in the Military Cantonment they should receive medical aid from the Surgeon or Assistant Surgeon in charge of the Staff; while, if they are located in the Civil Lines, they ought, in like manner, to have a right to the services of the Civil Surgeon. When, however, they can at all afford it, they might be expected, like other persons similarly circumstanced, to pay the Doctor something for any attendance on their families.

3. In the particular case of Agra, I am of opinion that the Telegraph employés ought to receive medical assistance from the Garrison Surgeon of that place, and that there and at other principal Telegraph Stations where the Christian and other subordinates are in considerable numbers, the Medical Officer, Civil or Military, might fairly be granted a conveyance allowance of Rupees (30) thirty a month.

FINANCIAL DEPARTMENT, No. 13752, FORT WILLIAM, THE 22ND NOVEMBER 1861.

FORWARDED to the Officiating Civil Pay Master, Fort William, for report, with reference to Articles 22 and 33 of Chapter V. of the Bengal Medical Code, and to the general practice observed in the Civil Department.

CIVIL PAY MASTER'S OFFICE, FORT WILLIAM, THE 29TH NOVEMBER 1861.

Memorandum.

RULE XXXIII. of the Medical Code provides that if a Civil Officer resides from necessity in a Military Cantonment, he is entitled to medical aid from the Civil Surgeon. It is submitted that Telegraph Officers come under that category. Civil Surgeons are not entitled to travelling allowances for visiting out-posts of a less distance than five miles.

FINANCIAL DEPARTMENT, FORT WILLIAM, THE 13TH DECEMBER 1861.

Resolution.

THE Governor General in Council observes that under Rule XXXIII. of the Medical Code, Civil Surgeons are bound to attend all Telegraph Officers in the Civil Station, and all Civil Servants who of necessity reside in Military Cantonments in consequence of there being no suitable residence in the Civil Station. But those who reside in the Cantonments merely from choice cannot demand the services of either the Civil or the Military Surgeon, and must make their own arrangements.

With respect to the proposal of the Principal Inspector General of the Medical Department, that an allowance of 30 Rupees per month be made to the Medical Officers, Civil or Military, at all the principal Telegraph Stations where the Telegraph subordinates are in considerable numbers, His Excellency in Council observes that Civil Surgeons are not entitled to travelling allowances for visiting out-posts of a less distance than five miles.

(Signed) C. H. LUSHINGTON,
Secy. to the Govt. of India.

APPENDIX D.

From A. M. MONTBATH, Esquire, Under Secretary to the Government of India, Home Department, to Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India,—No. 2154, dated the 30th November 1861.

REFERRING to the correspondence noted in the margin, I am directed to transmit for your information the accompanying copy of a Memorandum by Sir William O'Shaughnessy, on the subject of the re-organization of the Establishment of the Electric Telegraph Department.

To Officiating Director General of Telegraphs, No. 829, dated 20th April 1861.
From Officiating Director General of Telegraphs, No. 410, dated 6th June 1861.

Memorandum by Sir William O'Shaughnessy.

WITH reference to the Despatch from the Government of India, dated 14th June, I have to observe, in the first place, that it is most unjust and unreasonable on the part of the Bombay complainants to impute corruption to the Telegraph Department *generally* on the facts they adduce. The wires were cut and instruments introduced for the fabrication and falsification of messages by persons previously dismissed from the Department, bribed by other parties. It is almost impossible to prevent the occurrence of such crimes. One might as fairly blame the Bank of England or the Mint for the issue of forged notes and spurious coin. While the Telegraph Department embraces all India, Pegu, the Punjab, Scinde, and Ceylon, it is *only in the Bombay Circle* that these occurrences have taken place; and this, beyond all doubt, proceeds from the demoralization caused there by the Opium gambling itself.

As the Chamber of Commerce of Bombay were pleased to certify last year, on my leaving India, that they were satisfied with my administration of the Department, I cannot regard the present complaint as in any degree reflecting on myself. On the assertion that "Military Officers are unfit by their previous training for the direction of the Department," and that "*men of business*" should be appointed, to observe that I never met a better "business man" than my late lamented Assistant * * * , and the most useless and inefficient persons in our Establishment have been "Office men" of previous Mercantile or Civil training, such as Mr. * * *, Mr. * * *, and Mr. * * *.

The real objections to the employment of Military Officers in the Telegraph Department are their liability to be called away to Military duties at critical times, and their being independent of the Department itself if they become discontented with

their pay or position, or find their duties onerous. The temporary employment of Major Stewart on the fortifications of Benares threw the whole Department into confusion for several months.

I shall return presently to the subject of the persons who should be employed. I must now observe that, while the general imputations conveyed in the complaint are most unjust, I am still of opinion that the Telegraph Department is open to some blame on other grounds. The abolition of the Local Examiners' Offices for the scrutiny of messages in Bombay and Madras; the depriving the Superintendents of these Circles of all power over their subordinates, and prohibiting these Officers themselves from the examination of messages transmitted by or through their Offices; the removal of Line Guards and Mounted Patrols from many of the lines; the want of due preparation for the present monsoon; and the consequent occurrence of the most unprecedented delays of all messages between Calcutta and Bombay since the end of last May. All these are matters for which the present administration of the Department is answerable.

Reverting to the Establishment, I fully agree with the Bombay Government as to the absolute necessity for the employment of "well-paid and respectable men" in every Telegraph Office. I have pressed this view for years and labored hard to carry it into practical application. Of the 80 young gentlemen sent from England by my advice in 1856-57 the greater number have been appointed to the charge of Offices, and these are as well and as honorably managed as any Offices in the world. I may add too, that, in attempting to improve the state of the Bombay Stations by placing these in the hands of *English gentlemen*, I, in 1858, encountered fierce opposition from the Bombay Press, which teemed with abuse of my proceedings for appointing men of education and integrity in supersession of incompetent Eurasians and others who were dismissed for gross misconduct.

To carry out the views expressed by the Bombay Government, and so long contended for by myself, I am strongly of opinion that we should send out at least 50 more English Assistants thoroughly trained to the use of French writing instruments, and on the same footing as the Morse Assistants who went to India in 1856-57.

The introduction of the French writing instruments (now being provided) will afford invaluable aid in the prevention and detection of falsifications and in the conviction of the persons guilty.

The rapid introduction of the iron posts and new insulators will put an end to the intolerable delays now caused by interruptions, and will justify the Department in reducing Line Patrol Establishments prematurely and injudiciously discharged early this year.

There are grave objections to the mode of charging for cipher groups of five figures advised by the Bombay Government. I have in a previous Report shewn that,

owing to the prevalence of natural electric currents all over the Indian Lines, the dots

* "A Single dot, more or less, converts any figure into that next before or after it in the scale. Now in every thunder-storm, and even in storms hundreds of miles distant, the instruments are every now and then acting of themselves, and frequently for several minutes making dots and dashes and actual figures, so that it is only by the context of words and letters that the work of the Signaller can be distinguished from the effects of electrical disturbances in the air."

and dashes by which figures are represented, or their values altered, are incessantly made by accidental atmospheric currents, and that all figures must be telegraphed in words spelt in full*. We should thus be called upon to signal five words for the price of one, while our tariff is already by far the cheapest in the world. Any merchant, speculator, or gambler, can very easily construct a simple but impenetrable code of

our lines at an absolutely insignificant cost.

The necessity of a further legal enactment inflicting the penalty of transportation for the falsification and fabrication of messages has been pointed out by Lieutenant-Colonel Douglas, with whose opinion on this point I fully agree.

I would further advise strongly that the Local Examiners' Offices at Bombay and Madras may be forthwith re-established; that the power of control formerly possessed by the Superintendents of these Divisions be restored; and that the most active, vigilant, and strict Officers of the whole Department be employed in the Bombay Circle, where, I am of opinion, there has been much apathy on the part of the gentlemen now in charge.

The cash receipts of the Department for private messages only had, in May last, attained the rate of £60,000 per annum. The cash received for Government messages £20,000 per annum. Every month receipts exhibit a steady increase. If iron posts and the new insulators be supplied for the whole of India, as urged by the Government of India and myself, full trained gentlemen be sent out from England as now advised; and if other measures above specified be carried into effect, the revenue of the Department would most assuredly increase so rapidly that, in two years from this time, a considerable yearly profit will be realized, while the Establishment will *puri passu* improve from day to day and prove of inestimable value to all classes of the community.

LIVERPOOL; } (Signed) W. B. O'SHAUGHNESSY.
The 15th August 1861. }

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to A. M. MONTEATH, Esquire, Under Secretary to the Government of India,—No. 2316, dated the 12th December 1861.

REPLYING to your No. 2151 of the 30th ultimo, forwarding copy of a Memorandum by Sir W. O'Shaughnessy, which appears to be a reply to the remarks of the Bombay Chamber on the occasion of the late frauds in that Presidency.

2. Sir W. O'Shaughnessy considers that the Department is open to some blame in consequence of certain changes in its administration introduced by me during the

past fifteen months. I will briefly remark on these changes in the order they occur in his Memorandum.

1st.—The abolition of the Local Examiners' Offices for the scrutiny of messages in Bombay and Madras.

1st.—The Local Examiners' Offices, not only in Bombay and Madras, but in every Circle in the Department where they existed, were abolished on the 30th September 1861.

I considered that these Offices were superfluous as a means of affording data to reply to complaints regarding delay or non-delivery of messages for the following reasons :—

1st.—Because the information already existed in a much more perfect form in the Central Complaint Office established in Calcutta by Sir William O'Shaughnessy in January of the same year; and 2nd, because a complaint made by any person to the Head-Quarters of the Circle in which the message was tendered for transmission would probably have to be referred to two or three other Circles before any satisfactory reply could be received. For instance, under the old arrangement supposing a message sent from Calcutta to Bombay had been erroneously delivered, and it happened, as is frequently the case, that the message reached the Bombay Office correct, but that an error had been made by the Copying Clerk in making the fair copy for the addressee, the sender would complain to the Deputy Superintendent, Bengal, who, after tracing the message through his Circle, would either state in reply that the message passed correctly through the Offices in his charge, and would refer the complainant to the next Circle, Indore, where the same course would be repeated by Indore referring the sender to Bombay, or else he would make the necessary enquiry himself from Circle to Circle until the place where the error occurred had been traced,—thus throwing a considerable amount of labor and trouble on Deputy Superintendents, which the Central Complaint Office has the means of entirely avoiding and of affording the sender a satisfactory reply without further reference to other Offices.

As a means of detecting errors by Deputy Superintendents regarding which complaint had not been made I consider these Local Examiners' Offices a farce. I can speak from experience of that in the Bengal Circle at the time I directed its abolition. The Examiners were, I think, three months in arrears, and I have reason to believe that little or no attention was paid to the results of the examination, and certainly none of a satisfactory character.

I am at a loss to understand Sir William O'Shaughnessy's objections to the closing of these Local Examiners' Offices, for it appears, from his Annual Report for 1857-58, that he entertained similar opinions to myself of their uselessness, and he appears, at that time, to have abolished them, although it is not shewn how they came to be re-instated. In page 28 of that Report he writes as follows :—

" 108. On my return in December last year I found all this changed. The accounts were in almost inextricable confusion and arrears. The Offices in the Bombay and Madras Circles, and to a great extent in the North-Western Provinces, were almost

"in utter disorganization,—night alarms were never attended to, a new system of the examination of messages had been introduced, *viz.*, leaving this in the hands of Deputy Superintendents of each Circle, instead of the Head Office; the Deputy Superintendents sent in a weekly Tabular Statement professing to shew the total number of messages, their number of words, exact number of errors, this, with great apparent precision, to the fifth decimal place: what degree of reliance was to be placed on such Reports may be judged by the fact that, soon after my arrival at Bombay, I took sudden possession of the Examiners' Records and found that for more than six months the Returns had been a mere sham; the detailed Reports had seldom or never been read, and several hundreds were found still in the unopened envelopes.

"I have accordingly directed the former system to be resorted to, and, after much passive and open resistance on the part of some Office Assistants, I have nearly brought matters into a good working state again."

A return to the old system of Local Examiners' Offices would not only be a source of a large monthly increase to Departmental expenditure, but would entail postage on some 240,000 sheets of paper annually in copies of messages alone, exclusive of envelopes, as also doubtless a large increase of correspondence, besides an immense amount of labor on our already hard-worked Signallers, for it would then be necessary to make a copy of every message that passed through a Signal Office to supply the materials for the Local Examiners' Offices. Assuming that the present system has its evils, which I do not admit, I would, even if such were proved to be the case, rather let such remain than incur the much greater evils which would be entailed by a re-introduction of the Local Examiners' Offices, and the necessarily attendant increased work in every Signal Office throughout India.

2nd.—I annex copy of every Circular, six in number, issued by me up to present date

2nd.—The depriving the Superintendents of these Circles of all power over their subordinates.

in any way limiting the powers previously possessed either by Superintendents or Deputy Superintendents prior to my incumbency. They are as follows:—

I. Circular No. 12 limiting a power which led to constant and reckless removals and changes of Assistants, Signallers, and others, and which was a fruitful source of the discontent so prevalent in the Department, entailing also much expense.

II. Circular No. 20 controlling expenditure which has been necessary in every Department.

III. Circular No. 52 abolishing the Local Examiners' Offices under the Deputy Superintendents.

IV. Circular No. 75 prohibiting the reading of messages by Superintendents and Deputy Superintendents.

V. Circular No. 81 removing the power of fining by Deputy Superintendents for errors made in the transmission of messages.

VI. Circular No. 119 limiting the hitherto uncontrolled power, which, it appears, all persons in the Department exercised, of inflicting fines on those under them. Considering that in all cases where a heavier punishment in excess of the limit is necessary,

it is proper that the character of the person should be brought directly under the view of the Head of the Department, as it is generally better that he should be removed from the Department than punished by any excessive fine.

3rd.—Copy of my order on this subject, Circular No. 75, is annexed. It has

3rd.—And prohibiting these Officers themselves from the examination of messages transmitted by or through their Offices.

been reported that, in the correspondence connected with Mr. * * * * 's case, he was in the habit of taking the messages into his private room for perusal,

and the same was done to my own knowledge by the Deputy Superintendent of the * * * * Circle. The Superintendents of Divisions and the Deputy Superintendents of Circles have ample means of knowing the working of their Circles by the daily reports from their Offices, &c., without reading the service and private messages that pass along the line. In fact they could have gained no information whatever from any such examination beyond learning the contents of messages, as it is but very recently that the practice of giving the dates when messages left the despatching station was introduced by myself, therefore it would have been impossible for them to know how long a message had been on the line, and, supposing errors had been discovered in such messages, it would have been equally impossible for them to know whether such occurred in their own or in any other Circle, unless through the agency of the Local Examiners' Offices, which, as I have already pointed out, were a useless burthen to the Department since the establishment of the Central Examiner's Office in Calcutta.

4th.—On this point I have already informed Government, in my No. 1263 of

4th.—The removal of Line Guards and Mounted Patrols from many of the lines.

the 20th August, that my opinion of the uselessness of these men was confirmed by every Deputy Superintendent in the Department whose opinion was worth having, and the results have fully borne out my anticipations. The East Coast, Central India, and the Dacca Circles were those in which the system of Line Guards had by far its greatest development, and these three were those in which communication was most frequently interrupted. Since the beginning of the year the Line Guards in the East Coast Circle have been entirely removed, and from the same period the working of that Circle has been an example of excellence to the whole Department. In July the majority of the Line Guards have also been removed from the Dacca Circle, and since then the working of that Circle has progressively improved. The Central India Circle has alone retained its original complement of Line Guards, and in that Circle alone has the working remained unimproved. I attribute the improvements in the working of the East Coast and Dacca Circles mainly to the changes in the Deputy Superintendents, and I merely mention these facts in proof of how absolutely indifferent the presence or absence of Line Guards is to the good or bad working of the lines.

5th.—The delays in the transmission of messages during the past season were in no way consequent on any want of preparation for the monsoon, but were caused partly by the loss of cables, from the unusually heavy floods, but chiefly from the absence of the insulation on lines and delays proportionate to

5th.—The want of due preparation for the present monsoon and the consequent occurrence of the most unprecedented delays of all messages between Calcutta and Bombay since the end of last May.

way consequent on any want of preparation for the monsoon, but were caused partly by the loss of cables, from the unusually heavy floods, but chiefly from the absence of the insulation on lines and delays proportionate to

the amount of rain will occur every season until a good system of insulation has been introduced.

6th.—The introduction of more English hands would doubtless be very desirable ; and,

6th.—I am strongly of opinion that we should send out at least 50 more English Assistants thoroughly trained to the use of the French writing instruments and on the same footing as the Morse Assistants, who went to India in 1866-57.

if the Government should decide on adopting this suggestion, I would strongly recommend that no Assistant should be permitted to join the Department until he had passed an examination both in the theory and practice of Telegraphy in accordance with a fixed test, and that examination should be conducted by some person of acknowledged ability as an Electrician who has not been personally concerned in the training of the candidates.

From W. GREG, Esquire, Secretary to the Government of India, to Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India,—No. 893, dated the 15th February 1862.

YOUR letter No. 2316, dated the 12th December, written with reference to the Memorandum by Sir William O'Shaughnessy to the Secretary of State on the subject of the organization and management of the Electric Telegraph Department having been laid before the Governor General in Council, I am directed to state that His Excellency in Council considers that you have satisfactorily answered the several objections made by Sir William O'Shaughnessy to the present management of the Department.

2. The Governor General in Council does not doubt that it would be very inexpedient to revert to the system of local examination of messages either in lieu of or in addition to the present Central Complaint Office ; or to give to the Local Superintendents more power over their subordinates than they now possess ; or to permit those Officers habitually to examine messages ; or to restore the Line Guards and Patrols, whose services have been dispensed with.

3. His Excellency in Council believes that the recently sanctioned re-organization of the Department will tend more than any thing to make the Service efficient by raising its character and holding out adequate rewards in the way of pay and promotion to all employed in it : that if in addition to this a proper system of insulation can be attained, there will be little left to be desired.

4. The charge made by Sir William O'Shaughnessy against the Telegraph Department, of not being prepared for the late monsoon, is not, in the opinion of the Governor General in Council, borne out. The interruptions which occurred were attributable to accidents which could not have been prevented, and to the inherent defect of non-insulation.

5. His Excellency in Council concurs generally in the view expressed in your 6th paragraph as to the advisability of obtaining more Assistants from England, but he considers it undesirable that 50 should be sent out at once, as would seem to be contemplated by Sir William O'Shaughnessy. It should be determined, in the first instance, how many English Assistants are required both for employment at the principal Offices as Signallers

and for filling up vacancies in the higher ranks of the Service; and when this number shall have been gradually reached, a fixed number should then be sent every year so as to keep up the Establishment uniformly at its proper strength. I am directed to request that you will submit a definite proposal based on this plan. The proposal should include provision for the due examination of Assistants in England under the orders of the Secretary of State before they are sent out, the object being to have at all times a few European trained Signallers for the chief Offices, being young men fitted, both by general education and by knowledge of the business of Telegraphy, and by acquaintance with the most recent improvements therein, to fill, in course of time, the higher offices of the Department.

Extract from Despatch No. 9, dated London, 17th June 1862, from the Right Hon'ble the Secretary of State for India, to His Excellency the Right Hon'ble the Governor General of India in Council.

"Para. 2.—You have been informed, by my letter No. 6 of the 31st March last, of my general approval of the changes in the Establishment of the Telegraph Department, as reported in your No. 1, dated the 15th January. Your further letter on the same subject, No. 4 of the 18th February, therefore, calls for no remark.

"Para. 3.—Colonel Douglas has, I think, shewn that there was no omission on his part to make due preparation for the last monsoon. He has also shewn good reason for the changes which he has introduced in the working of the Department."

APPENDIX E.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to R. H. DAVIES, Esquire, Secretary to the Government of Punjab,—No. 1324, dated the 27th August 1861.

I HAVE the honor to request that, should His Honor the Lieutenant-Governor see no objection, orders may be issued to the Police of the Districts under his Government to give immediate intimation, at the nearest Telegraph Office, of the nature and position of any accidents to the Telegraph Lines which they may observe. The arrangement would be one of great convenience to this Department, as well as of much advantage to the Government and the public in shortening the duration of interruptions.

From R. H. DAVIES, Esquire, Secretary to the Government of Punjab, to the Director General of Telegraphs in India,—No. 450, dated Murree, the 7th September 1861.

IN reply to your No. 1324 of the 27th ultimo, I am directed to inform you that the Inspector General of Police has been requested to issue the necessary orders for information of accidents to Telegraph Lines being given to the nearest Telegraph Office.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to W. GREY, Esquire, Secretary to the Government of India,—No. 1861, dated the 20th October 1861.

I HAVE the honor to submit copy of a letter addressed to the Secretary to His Honor the Lieutenant-Governor of Punjab, suggesting that it should be made a part of the duty of the Punjab Police to report to the nearest Telegraph Office accidents to the Telegraph Lines. His Honor's reply and a copy of the order issued on the subject is also enclosed.

2. It appears very desirable that similar orders should be issued to the Police throughout India, and in this view I submit the proposal for the consideration of Government and for the issue of the necessary orders to the Local Governments, should there be no objection to the arrangement.

CIRCULAR No. 80 of 1861.

From Major G. HUTCHINSON, Inspector General of Police, Punjab, to all Deputy Inspectors General,—Dated Lahore, the 12th September 1861.

Requests he will order the Police to give immediate intimation at the nearest Telegraph Office of the nature and position of any accident to the Telegraph Lines which they may observe.

Injury to Telegraph Line to be reported.

2. In the Station Diary the report of the road Patrol must always note "Telegraph Line observed—'All right,' or the contrary, as it may be."

[*Telegraph.*]

[11]

From J. H. RIVETT-CARNAC, Esquire, Officiating Under Secretary to the Government of India,
Home Department,

To the Secretary to the Government of Bengal,

” Fort St. George,

” Bombay,

” N. W. Provinces,

The Chief Commissioner of Oude,

The Commissioner of

Pegu,

” T. and M. Provinces,

” Nagpore.)

{ Dated the 5th November 1861.

I AM directed to forward for the accompanying copy of a Circular issued under the orders of the Government of the Punjaub by the Inspector General of Police in that Province, directing the Police to give intimation at the nearest Telegraph Office of the nature and position of any accident to the Telegraph Lines, and to request that with an order to the same effect may be issued to the Police of

No. 3375.

COPY forwarded to the Officiating Director General of Telegraphs in India for information, with reference to his letter No. 1801, dated the 29th ultimo.

(Signed) J. H. RIVETT-CARNAC,
Offg. Under Secy. to the Government of India.

APPENDIX G.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to A. M. MONTEATH, Esquire, Under Secretary to the Government of India, Home Department,—
No. 3497, dated 10th April 1862.

REPLYING to your No. 1651 of the 31st March last, on the subject of certain proposed changes in the Rules of this Department.

2. Your letter remarks that, in the case of "Public Messages, the date of despatch by the Officer who sends it as well as the time of its despatch from the Telegraph Office should be recorded on the face of the Message."

3. The term date in strictness includes every information necessary for fixing the time of an event, and applied to Messages should include the year, month, day, hour, and minute of despatch; the year, month and day are very generally given by the public Officers, though some give the day only, which appears to be a sufficient dating in the case of Telegrams. The date given by this Department excludes the year and month, but gives the day, hour and minute, the latter two being introduced for Departmental purposes solely; and I see no advantage in burdening the line, by giving more than the above, or by adding thereto a sender's date.

4. Your letter further says the proposed modifications of No. XI. run thus—"The date and hour when a Message is received, &c., ought it not to be the time when a Message is despatched from a Telegraph Office?" To this I answer that what concerns the receiver as respects this Department is the time his Message has been in its hands. In cases of delay it is immaterial to him whether the delay has occurred from detention in an Office by the sender and that of signalling, or has arisen subsequently during the transit of the Message along the lines. In either case all he cares to know is when the Message was entrusted to the Department for despatch. This information is given in the present office date, and being given it is unnecessary to give more.

5. These Office dates are the only check against delay; and were instead of the date of delivery by the sender that of signalling given, this Department would have no direct check against detentions in the Despatching Office itself.

6. Further important considerations might turn on the date shewn in the Message. Suppose it to be a report of departure, say by Train, the Message being Mr. Smith, left by Train a few minutes ago, &c., &c. Suppose the date of signalling were given, and the Message by neglect or press of work had been detained some hours, it might then convey information very different from that expected and desired by the sender.

7. Your letter continues, with reference to the words given in the margin, extracted from the proposed modifications of No. XXI, is not
Within two months from the date of despatch. two months too long a period, and ought it not to be
 from the date of *delivery* rather than from that of despatch? The limit does not seem

very material. I retained the old limit of two months, but would have preferred three months in the case of Messages limited to India, its dependencies and Ceylon, and six months in the case of Messages for countries beyond India, as Egypt and Europe, for which no provision exists in the Rules, but which is introduced in the revised sketch of Rules XI and XXI appended to this letter.

8. Practically, I do not believe, were the limit a year, it would increase the number of complaints, perhaps the reverse; for the tendency of such long limit is to lead to complaints being deferred and ultimately forgotten.

9. The postal lines between places so distant, for instance, as Calcutta and Pondicherry, twenty-six days both ways, would almost entirely absorb the one month your letter suggests as the limit for complaints; and indeed, in the case of Messages, say from Cochin to Calcutta, the time for complaint would have passed ere it would be possible for the complaint of the most diligent person to reach, the postal time to and from not being under thirty-six days.

10. As respects the commencement of the period within which complaint should be made, the date of despatch would be more convenient than that of delivery, for the former would be shewn by the Office date, whereas the latter could not exist in cases of non-delivery, and in cases of delay could only be ascertained by a reference to the sending out Office. There would be rarely more than three days gained to the complainant by this change in the Rule, and I think a reduction of the present time, *viz.* two months to one month, would have the appearance of a desire to take advantage of accidental delays for denying redress in cases otherwise justly entitled to it. To the trouble to which the complainant is put in the recovery of what is frequently a trifling sum, it seems undesirable to add the annoyance of a refusal of justice on merely formal grounds.

11. In conclusion, I would take this opportunity of slightly modifying the sketch revision of Rules XI and XXI, submitted with my No. 2635 of the 23rd February, and of introducing into No. XXI the changes referred to in paragraph 6 above.

P. S.—It has occurred to me, in referring to the opinion given in paragraph 7 above, to ascertain what proportion of complaints have, during the currency of this official year, been rejected on the ground that the limit for their submission had been passed. I find this number to be 15 or $2\frac{1}{2}$ per cent. on the total number of complaints received, which up to date has been 699.

APPENDIX H.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to E. PALMER, Esquire, Agent East Indian Railway Company,—No. 2140, dated the 22nd November 1861.

REPLYING to your No. 10596 of the 1st ultimo, in which objections are raised to this Department placing its Telegraph posts within the boundary of the Railway embankment between Burdwan and Patna.

I consider that the license under which the Railway Telegraph is worked, and which gives Government the power of erecting its lines on the posts of the Railway Company, should they desire to do so, also gives the Department the right to construct its own lines within the limits of the Railway fences; and I trust, therefore, that the objections you have raised to our so doing may be withdrawn.

In reference to Mr. Beadon's letter, in which he directed, in view to avoid disputes, that the lines of this Department were not to be constructed within the Railway boundary fence, I would remark that such letter could only have been written under the impression that the right in question could be waived without detriment to the interests of the Department.

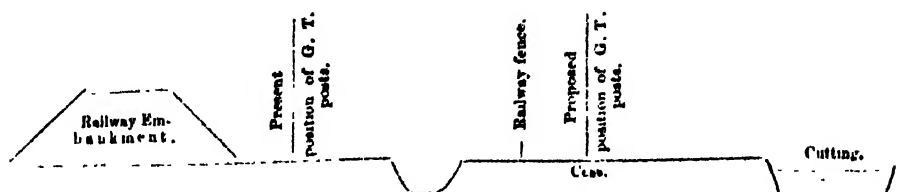
Such, however, is very far from being the case so long as the Government line *via* Patna did not extend beyond that town, and when it led to no important station, and was of no use as an alternative line of communication, it was of little value to the Department, and the question of its easy inspection and repair was of little moment. Now, however, that it is a portion of the main line running through Central India, it is of the highest importance that the Department should possess every facility for its inspection and repair, and such cannot be the case if placed outside the Railway fences, for then any inspection necessarily could not do more than detect the grosser causes of interruption, such as the falling of posts or breakage of wire, leaving the less obvious causes produced by breaking of Insulators, contacts of the line wire with stays, &c., undetected, and necessitating an inspection on foot which, in the dry season, owing to the extent of the Railway excavations at the foot of the embankment, would be exceedingly difficult, and during the rains, when such excavations become filled with water and the country generally flooded, altogether impossible.

After this explanation I trust that the right of the Department to construct a new line from Burdwan to Patna within the Railway enclosure may be no longer disputed, and that instructions may be given that all reasonable facility may be afforded to the Officers of this Department employed on its construction.

From E. PALMER, Esquire, Agent, East Indian Railway Company, to Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India,—No. 12363, dated the 25th November 1861.

I HAVE the honor to acknowledge the receipt of your letter No. 2140 of the 22nd instant.

2. I consider it objectionable for the Government Telegraph posts to be situated within the Railway fences, and am still of opinion that it were practicable, they should be erected on the cess between the fence and the edge of the cutting, as shown in my sketch below.



3. Where the space intervening between the Railway fence and the edge of the slope is under water, and too low to admit of the posts being erected there, without inconvenience or the probability of the telegraphic communication being interrupted, I shall of course offer no opposition to their being placed within the fence; but as a precautionary measure against accidents likely to arise from inexperienced persons being upon the Railway, in no way subject to the Railway Authorities, and in order to prevent trespass as much as possible, I consider the Government posts should be erected without the Railway fences wherever it can be done.

4. If you are, however, still anxious to erect the Government Telegraph within the Railway fences, I should prefer your submitting the case to Government for its consideration; such orders on the subject will then be issued as will absolve me from responsibility in cases of accident, should it be decided to erect the posts within the Railway boundaries. The objections I have raised are, I think, sufficiently grave to justify me in declining to accede to your request in the mean time.

5. The Chief Engineer will be desired to issue instructions for every assistance to be given to the Officers of Government in erecting and maintaining the Telegraph, as requested in the concluding paragraph of your letter.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to W. GREY, Esquire, Secretary to the Government of India, Home Department,—No. 2433, dated the 28th December 1861.

I FORWARD copies of correspondence which has lately passed between the Railway Authorities and this Department, on the subject of the Government line between Burdwan and Patna now about to be re-constructed.

1. Mr. Palmer, it will be observed, objects to the new line being erected within the limits of the Railway fences. He appears to apprehend accidents if the new line is so situated, but his letter is not clear as to the nature of the accidents apprehended, or whether they will happen to the persons, or the constructions of the Railway, or of this Department. My letter to Mr. Palmer has pointed out the impossibility, owing to the extensive and irregular Railway excavations, either of the construction or of the supervision of a Telegraph line outside the Railway fences, except at so great a distance as to render the detection of causes of interruption, other than those of the grosser kind,

impossible. It also points out that, owing to the liability to extensive flooding of the district through which the line passes, the minute inspection, which would become necessary to detect the less obvious causes of interruption as well as the work of repair, becomes during the rainy season nearly impossible. That Mr. Palmer has little ground for the apprehension of accidents which he entertains may be inferred from the fact that, although the line from Bidabutti to Ranegunge, a distance of 105½ miles, lies within the limits of the Railway fences, no complaint has to my knowledge ever been made that its so laying has been the occasion of accident.

The Railway Company's license gives to the Government the right of attaching wires to the supports of the Railway Company's Telegraph lines,—a right held by every European Government, the British Government not excepted; and there can be no doubt that this major permission includes the minor one of erecting independent lines within the Railway fences. The existing permission, however, was withdrawn by Mr. Secretary Beadon's No. 1785 of the 3rd August 1858, on the grounds of certain disputes between the employes of the two Departments, with the details of which I am not acquainted. My own belief is that disputes between subordinates of Departments cannot arise, or at least are easily put an end to, if the Departments concerned earnestly desire to co-operate with each other, and it is only when indications of a contrary spirit are evident that collisions are at all probable. The withdrawal of the permission, I feel assured, can only have been done under the impression that no inconvenience to this Department would result. As I have shewn that this is far from being the case, and as the experience of the line to Ranegunge has proved that Mr. Palmer's apprehensions are groundless, I trust that the existing prohibition to the construction of the lines of this Department within the fences of the East Indian Railway may be withdrawn.

Extract from the Proceedings of the Right Hon'ble the Governor General of India in Council, in the Home Department, Electric Telegraph,—No. 643, under date the 3rd February 1862.

READ a letter No. 2433, dated 25th December, from the Officiating Director General of Telegraphs in India, submitting a copy of correspondence regarding the Government line of Telegraph between Burdwan and Patna about to be re-constructed, and requesting withdrawal of the existing prohibition of the construction of Government lines within the fences of the East Indian Railway Company.

RESOLUTION.—The Governor General in Council observes that in 1858 it was suggested by the Public Works Department that, in order to prevent all cause of dispute in future between the Officers of the Telegraph Department and those of the East Indian Railway Company, any new Telegraph carried along the Railway should be placed outside the boundary, and not within it; and that as opportunity offered, existing Government Telegraph lines constructed within the East Indian Railway Company's ground should be removed to the outside.

Orders were issued accordingly to the Telegraph Department from the Home Office on the 3rd of August 1858, it being added by way of proviso that the Government lines should, nevertheless, be so placed as to be easily accessible from the Railway.

Colonel Douglas, the Director General of Telegraphs, now represents, with reference to the line from Burdwan to Patna, that the inconvenience of constructing the Government Telegraph outside the Railway boundary will be so great as to make it essential that the Government should assert its right to erect the line within the boundary. This right,

* No. XXXIV.

the Governor General in Council observes, is clearly given in Section 6 of Act VIII. of 1860, which is a repetition of Section 5 of the earlier Telegraph Act* of 1854.

His Excellency in Council is of opinion that, on the representation now made by the Director General of Telegraphs, permission should be given to the Telegraph Department to re-construct the line between Burdwan and Patna within the Railway Company's boundary ; and he directs that the letter from Colonel Douglas be sent to the Public Works Department with a request that it may be intimated to the Agent of the East Indian Railway Company that the public convenience imperatively requires that the Government should act upon its right to put up the Telegraph inside the Railway premises ; but that it will be done so as not in any way to interfere with the Railway Telegraph, or with any of the Railway arrangements.

His Excellency in Council observes that the Agent should be requested to instruct the Officers of the Railway not only not to obstruct the Officers of the Telegraph, but rather to render them such assistance as they can : and, on the other hand, that the Director General should be desired to instruct his subordinates in putting up and working the Telegraph inside the Railway boundary, to avoid all contact with Railway property, and all cause of dispute with the Railway Authorities.

ORDERED accordingly, that a copy of the letter from Lieutenant-Colonel Douglas, with a copy of this Resolution, be forwarded to the Public Works Department.

Ordered also, that a copy of this Resolution be sent to the Director General of Telegraphs, with reference to his letter No. 2433, dated the 28th of December, for information and guidance.

I have, &c.,
(Signed) W. GREY,
Secretary to the Government of India.

APPENDIX I.

Classified List of Offices under the Indian Government.

N. B.—The number of messages and cash collections are exclusive of those on Departmental Service.

The names of Offices only occasionally opened are given in italics, and an asterisk is placed against the names of Offices opened for the convenience of Governors of Presidencies and Lieutenant-Governors of Provinces.

NAMES OF OFFICES.	In what Circle.	Whether Departmental or private building, and whether free or on rent	Monthly rent.	Number of Instruments.	AVERAGE OF THE LAST THREE MONTHS OF THE YEAR.		Whether self-supporting or unprofitable.	REMARKS.
					Monthly number of Messages.	Monthly Collection.		
			Rs.			Rs. As. P.		
1 Aekberpore ...	Indore ...	G. P.	...	2	5	18 0 0	Unprofitable.	
Agra ...	Bengal ...	G. P.	...	2	219	424 0 0	Self-supporting.	
Ahmedabad ...	Bombay ...	R.	40	2	618	1,174 0 0	Ditto	
Ahmednuggur ...	Ditto ...	R.	50	1	74	192 0 0	Unprofitable.	
5 Akyab ...	Dacca ...	G. P.	...	2	243	537 0 0	Self-supporting.	
Allahabad ...	Bengal ...	R.	150	2	318	712 0 0	Ditto	
Allyghur ...	Punjab ...	R.	50	2	45	83 0 0	Unprofitable.	
Atchepore ...	Bengal ...	R.	40	2	3	0 0 0	Ditto	
Attuck ...	Punjab ...	G. P.	...	2	21	76 0 0	Ditto	
10 Ballasore ...	East Coast ...	G. P.	...	2	29	48 0 0	Ditto	
Bangalore ...	Madras ...	R.	110	2	217	438 0 0	Self-supporting.	
Bareilly ...	Punjab ...	R.	150	2	82	140 0 0	Unprofitable.	
Baroda ...	Bombay ...	R.	50	2	109	208 0 0	Ditto	
Barrackpore ...	Bengal ...	R.	55	2	21	55 0 0	Ditto	
15 Belgaum ...	Bombay ...	R.	50	3	85	152 0 0	Ditto	
Bellary ...	Madras ...	R.	50	3	80	137 0 0	Ditto	
Benares ...	Bengal ...	R.	50	4	235	464 0 0	Self-supporting.	
Beora ...	Indore ...	G. P.	...	2	0	22 0 0	Unprofitable.	
Berhampore ...	East Coast ...	R.	50	2	198	488 0 0	Self-supporting.	
20 Bezwarah ...	Ditto ...	G. P.	...	4	33	54 0 0	Unprofitable.	
Bhaugulpore ...	Bengal ...	R.	...	2	35	57 0 0	Ditto	
Himlipatam ...	East Coast ...	R.	25	3	167	248 0 0	Ditto	
Bombay ...	Bombay ...	R.	450	4	3,831	10,098 0 0	Self-supporting.	
Broach ...	Ditto ...	R.	30	2	245	503 0 0	Ditto	
25 Buddeena ...	Scind ...	G. P.	...	2	3	4 0 0	Unprofitable.	
Bulsar ...	Bombay ...	R.	30	2	27	30 0 0	Ditto	
Burdwan ...	Bengal ...	R.	55	3	14	23 0 0	Ditto	
Burhee ...	Ditto ...	G. P.	...	2	24	51 0 0	Ditto	
Calcutta ...	Ditto ...	R.	500	7	2,561	12,052 0 0	Self-supporting.	
30 Calicut ...	Madras ...	R.	45	2	25	602 0 0	Ditto	
Cannore ...	Ditto ...	R.	50	2	251	534 0 0	Ditto	
Calingsapatam ...	East Coast ...	R.	15	2	104	208 0 0	Unprofitable.	
Cawnpore ...	Bengal ...	R.	70	3	271	417 0 0	Self-supporting.	
Chanda ...	Central India ...	R.	15	2	14	18 0 0	Unprofitable.	
35 Chicacole ...	East Coast ...	R.	20	2	47	101 0 0	Unprofitable.	
Chinoor ...	Central India ...	G. P.	...	2	...	0 0 0	Ditto	
Chittagong ...	Dacca ...	R.	60	2	43	112 0 0	Ditto	
Cochin ...	Madras ...	R.	80	2	403	1,032 0 0	Self-supporting.	
Cocconada ...	East Coast ...	R.	40	2	459	908 0 0	Ditto	

NAMES OF OFFICES.	In what Circle.	Whether Departmental or private building, and whether free or on rent.	AVERAGE OF THE LAST THREE MONTHS OF THE YEAR.				Whether self-supporting or unprofitable.	REMARKS.
			Monthly rent.	No. of Instruments.	Monthly number of Messages.	Monthly Collection.		
			Rs.			Rs. As. P.		
40 Comilla ...	Dacca ...	R.	20	2	35	62 0 0	Unprofitable.	
Cuttack ...	East Coast ...	R.	80	2	88	200 0 0	Ditto	
Dacca ...	Dacca ...	R.	140	2	123	236 0 0	Ditto	
Dapouria* ...	Bombay ...	G. P.	...	3	24	72 0 0	Ditto	
Deesa ...	Ditto ...	R.	85	2	61	136 0 0	Ditto	
45 Dehra ...	Bengal ...	G. P.	...	2	15	23 0 0	Ditto	
Delhi ...	Punjab ...	R.	22	3	185	272 0 0	Ditto	
Dera Ghazee Khan ..	Ditto ...	G. P.	...	3	30	104 0 0	Ditto	
Dera Ismael Khan ...	Ditto ...	R.	20	1	39	120 0 0	Ditto	
Dhoolia ...	Indore ...	R.	15	2	43	75 0 0	Ditto	
50 Dharwar ...	Bombay ...	G. P.	...	3	39	75 0 0	Ditto	
Diamond Harbour ...	Bengal ...	G. P.	...	3	13	21 0 0	Ditto	
Dowlahwarum ...	East Coast ...	R.	60	3	90	159 0 0	Ditto	
Farrukhpore ...	Dacca ...	G. P.	...	2	7	10 0 0	Ditto	
Futtehghur ...	Bengal ...	G. P.	...	3	83	140 0 0	Ditto	
55 Fyzabad ...	Ditto ...	G. P.	...	1	21	44 0 0	Ditto	
Goa ...	Bombay ...	R.	26	1	49	65 0 0	Ditto	
Gudduck* ...	Ditto ...	G. P.	...	2	...	...	Ditto	
Guindy* ...	Madras ...	G. P.	...	2	...	...	Ditto	
Gwalior ...	Indore ...	G. P.	...	2	90	109 0 0	Ditto	
60 Henzala ...	Pegu ...	G. P.	...	2	13	20 0 0	Ditto	
Houghly Point ...	Bengal ...	G. P.	...	2	4	9 0 0	Ditto	
Hyderabad (Deccan) ...	Central India ...	R.	140	3	242	535 0 0	Self-supporting.	
Hyderabad (Scind) ...	Scind ...	R.	50	3	51	103 0 0	Unprofitable.	
Indore ...	Indore ...	R.	80	2	351	649 0 0	Self-supporting.	
65 Jacobabad ...	Scind ...	G. P.	...	2	16	32 0 0	Unprofitable.	
Jessore ...	Dacca ...	R.	25	2	10	18 0 0	Ditto	
Jubbulpore ...	Central India ...	G. P.	...	2	59	107 0 0	Ditto	
Jullundur ...	Punjab ...	R.	30	2	54	126 0 0	Ditto	
Karikul ...	Madras ...	R.	20	2	43	81 0 0	Ditto	
70 Kenmaree ...	Scind ...	...	...	2	31	67 0 0	Ditto	
Kedgeroe ...	Bengal ...	G. P.	...	3	15	24 0 0	Ditto	
Kolapore ...	Bombay ...	G. P.	...	2	34	68 0 0	Ditto	
Kookrahatty ...	Bengal ...	G. P.	...	2	1	2 0 0	Ditto	
Kootree ...	Scind ...	R.	35	2	72	136 0 0	Ditto	
75 Kurnool ...	Central India ...	R.	70	2	44	77 0 0	Ditto	
Kurrachee ...	Scind ...	G. P.	...	2	319	1,050 0 0	Self-supporting.	
Kusmore ...	Ditto ...	G. P.	...	2	1	2 0 0	Unprofitable.	
Kyook Phyon ...	Dacca ...	G. P.	...	2	10	14 0 0	Ditto	
Lahore ...	Punjab ...	G. P.	...	3	210	780 0 0	Self-supporting.	
80 Lucknow ...	Bengal ...	R.	50	2	204	442 0 0	Ditto	
Madras ...	Madras ...	R.	260	3	1,660	4,013 0 0	Ditto	
Mahabaleswar* ...	Bombay ...	G. P.	...	1	62	175 0 0	Ditto	
Malabar Point ...	Ditto ...	G. P.	...	1	...	...	...
Malgum ...	Indore ...	G. P.	...	2	27	45 0 0	Unprofitable.	
85 Malheran* ...	Bombay ...	G. P.	...	1	...	...	...
Meerut ...	Punjab ...	G. P.	...	3	144	369 0 0	Self-supporting.	
Menglee ...	Pegu ...	G. P.	...	2	22	38 0 0	Unprofitable.	
Mercur ...	Madras ...	R.	30	2	131	262 0 0	Self-supporting.	
Midnapore ...	East Coast ...	G. P.	...	3	15	25 0 0	Unprofitable.	
90 Mirzapore ...	Central India ...	G. P.	...	2	136	259 0 0	Self-supporting.	
Mooltan ...	Punjab ...	R.	67	2	99	225 0 0	Unprofitable.	
Mooradabad ...	Ditto ...	R.	50	3	68	108 0 0	Ditto	
Mount, St. Thomas ...	Madras ...	R.	25	3	43	89 0 0	Ditto	
Mud Point ...	Bengal ...	G. P.	...	2	6	9 0 0	Ditto	

NAMES OF OFFICES.	In what Circle.	Whether Departmental or private building, and whether free or on rent.	Monthly rent.	Number of Instruments.	AVERAGE OF THE LAST THREE MONTHS OF THE YEAR.		Whether self-supporting or unprofitable.	REMARKS.
					Monthly number of Messages.	Monthly Collection.		
			Ra. Rent paid by Punjab Govt.			Ra. As. P.		
95 Murree*	Punjab	R.	20	1	222	416 0 0	Self-supporting.	
Masulipatam	East Coast	R.	20	1	222	416 0 0	Unprofitable.	
Mysore	Madras	G. P.	30	2	80	136 0 0	Self-supporting.	
Nagpore	Central India	G. P.	30	2	111	325 0 0	Unprofitable.	
Nasick	Indre	R.	30	2	33	61 0 0	Self-supporting.	
100 Negapatam	Madras	R.	60	2	111	268 0 0	Unprofitable.	
Nellore	East Coast	R.	45	2	27	49 0 0	Self-supporting.	
Nuggur Parker	Scinde	G. P.	...	2	6	7 0 0	Unprofitable.	
Nynce Tal*	Punjab	R.	600 for the season.	1	...	...	Ditto	
Ongole	East Coast	R.	20	2	43	80 0 0	Unprofitable.	
105 Ootacamund	Madras	R.	61	1	247	417 0 0	Self-supporting.	
Padeng	Pegu	G. P.	...	2	6	11 0 0	Unprofitable.	
Parrell*	Bombay	G. P.	...	1	...	...	Ditto	
Patna	Bengal	R.	50	2	101	201 0 0	Ditto	
Patnabau	Madras	G. P.	...	3	31	71 0 0	Ditto	
110 Pegu	Pegu	G. P.	...	2	24	39 0 0	Ditto	
Peshawar	Punjab	G. P.	...	1	87	234 0 0	Self-supporting.	
Pondicherry	Madras	R.	45	2	342	604 0 0	Ditto	
Poona	Bombay	R.	80	3	24	473 0 0	Ditto	
Princetown	Pegu	G. P.	...	2	110	244 0 0	Unprofitable.	
115 Ptocetta	Madras	G. P.	...	2	8	14 0 0	Ditto	
Ranchal	Bengal	R.	40	2	37	53 0 0	Ditto	
Rangoon	Scinde	G. P.	...	2	17	36 0 0	Ditto	
Rasool	Dacca	G. P.	...	2	8	13 0 0	Ditto	
Rasgunge	Bengal	G. P.	...	3	62	100 0 0	Ditto	
120 Razoon	Pegu	G. P.	...	2	50	1,512 0 0	Self-supporting.	
Rawal Pindoor	Punjab	G. P.	...	3	94	239 0 0	Unprofitable.	
Rawal	Central India	G. P.	...	2	10	20 0 0	Ditto	
Rawal	Punjab	G. P.	...	2	14	18 0 0	Ditto	
125 Rawla	Bombay	R.	70	2	41	79 0 0	Ditto	
Rawal	Bengal	G. P.	...	1	2	5 0 0	Ditto	
Rawal	Central India	G. P.	...	2	7	13 0 0	Ditto	
Rawal	Indore	G. P.	...	2	13	20 0 0	Ditto	
Shahpore	Punjab	R.	50	2	29	46 0 0	Ditto	
Shahpore	Scinde	R.	20	2	24	56 0 0	Ditto	
130 Shalghen	Pegu	G. P.	...	2	63	119 0 0	Ditto	
Shalghen	Punjab	R.	75	1	130	521 0 0	Self-supporting.	
Shalghen	Scinde	R.	15	2	58	90 0 0	Unprofitable.	
Shalghen	Bombay	R.	80	2	523	863 0 0	Self-supporting.	
135 Shalghen	Scinde	G. P.	...	2	9	14 0 0	Unprofitable.	
Shalghen	Pegu	G. P.	...	1	114	210 0 0	Self-supporting.	
Shalghen	Ditto	G. P.	...	1	110	132 0 0	Unprofitable.	
Shalghen	Madras	G. P.	...	2	200	585 0 0	Self-supporting.	
Shalghen	Punjab	R.	80	2	167	564 0 0	Ditto	
Shalghen	Ditto	R.	30	2	74	156 0 0	Unprofitable.	
140 Shalghen	Madras	R.	17	2	39	65 0 0	Ditto	
Shalghen	Bombay	R.	10	2	77	129 0 0	Ditto	
Shalghen	East Coast	R.	70	3	209	309 0 0	Self-supporting.	
Shalghen	Ditto	R.	21	3	41	79 0 0	Unprofitable.	
144 Shalghen	Central India.	R.	10	2	5	7 0 0	Ditto	

APPENDIX N.

From H. W. J. WOOD, Esquire, Secretary to the Bengal Chamber of Commerce, to Major C. DOUGLAS, Officiating Director General of Telegraphs in India,—Dated the 2nd February 1861.

THE Committee of the Chamber of Commerce desire me to draw your attention to the practice which they are informed prevails in your Office, of selling as waste paper copies of messages received by Electric Telegraph.

They are sure they need hardly point out to you who are probably unaware of the practice in question, how objectionable such a course is, even though the dates of messages be a twelve month old.

I send you three of these copies of messages which have been handed to the Chamber. Samples of sugar were wrapped up in them, and on enquiry it was stated that they had been obtained as waste paper in the bazaar.

From Major C. DOUGLAS, Officiating Director General of Telegraphs in India, to H. W. J. WOOD, Esquire, Secretary to the Bengal Chamber of Commerce,—No. 8859, dated the 20th February 1861.

IN reply to yours of the 2nd February, I have the honor to annex copy of a Circular Order, dated 19th November 1859, from which it will be seen that the practice of selling as waste paper copies of messages is a contravention of the Rules of this Department. Much difficulty has, however, been experienced in disposing of the old messages in Calcutta by burning, the Office premises being every way unfit for such an operation, and the owners of a neighbouring Steam Engine finding them unfit for engine fuel objecting to burn more than a very limited quantity daily, and restricting the time at which this can be done to between the hours of five and six. The only other place at which messages can be burnt is the Departmental Store-yard at Kidderpore, and the inconvenience of sending messages to so great a distance from the Office for destruction is great, as is also that caused by the necessity of having a Superior Officer of the Department present at the operation; and opportunity may have been taken by the persons in charge to remove a part of the messages while in transit to Kidderpore, and to sell them as waste paper.

If the Chamber could conveniently ascertain and inform me from whom the paper was purchased, I will have any that may be found seized by the Police as stolen property, and will then endeavour to discover how it came into the present holder's possession. Meanwhile I have issued instructions which prohibit the removal from the Office premises of waste paper of any description.

I beg you will offer my thanks to the Chamber for bringing the subject to my notice.

CIRCULAR ORDER No. 887, dated the 19th November 1859.

UNDER the orders of the Hon'ble the President in Council, dated the 8th instant, all copies of messages sent by the Telegraph are to be destroyed by fire three months after transmission.

2. The originals of the messages received for transmission in each Office are to be retained for 12 calendar months, and thereafter destroyed by fire also.

3. To prevent the possibility of private and confidential messages being divulged, all Assistants in charge of Offices are strictly empowered to see the messages destroyed by burning in their own presence. The duty is not to be entrusted to any other person, and its performance is to be reported monthly to the Deputy Superintendent of each Circle.

(Signed) W. B. O'SHAUGHNESSY,
Superintendent of Telegraphs in India.

From Major C. DOUGLAS, Officiating Director General of Telegraphs in India, to W. GREY, Esquire, Secretary to the Government of India, Home Department,—No. 9526, dated the 20th April 1861.

In consequence of an article which appeared in the *Bombay Times and Standard Newspaper* of the 25th ultimo, to the effect that Telegraph messages at Bombay had been treated as waste paper and had been picked up by strangers in the Colaba Office compound, I called upon Captain Murray, the Superintendent of Telegraphs, Western Division, for an explanation of the circumstances alluded to. His reply covering correspondence on the subject between Mr. Wickham, the Deputy Superintendent of the Bombay Circle, and the Bombay Government, is enclosed. The Rules of this Department prescribe the destruction of the old messages at all Offices by fire. This Rule was made at a time when two copies of every message were made, the one being for the Complaint Office, and the other for the Local Examiner's Office, at the Head Quarters of each Circle.

By a recent arrangement the Local Examiner's Offices have been abolished, and duplicates of messages are now no longer made.

The originals of all messages and copies taken in transit are posted daily to the Complaint Office, thereby rendering any provision for their destruction unnecessary, except in Calcutta, for in no other Office can any message exist, except by fraud or neglect, more than a day old.

From the circumstance that the Offices at which these copies of messages have hitherto been stored have always been at large Stations, their destruction by burning on the premises themselves has been next to impossible, and their removal to a distance has become necessary with the attendant risk of the messages being made away with en route, or the operation of destruction being inefficiently performed either by carelessness or intention. A case of this nature was lately brought to my notice by the Chamber of Commerce in Calcutta. A copy of the correspondence is annexed.

As the paper composing the old messages is valuable, and as their destruction cannot be performed on the premises, and as their removal to a distance for this purpose is open to the objections already shewn, I would propose obtaining a Guillotine Paper-cutting Machine for destroying the messages, the cost of which would soon be repaid by the value of the old paper which could then be sold ; and I have to solicit the sanction of Government for the purchase of such a Machine, which would also save the labor of a Duftry engaged on cutting paper and forms for the Printer. \

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to W. GRAY, Esquire, Secretary to the Government of India, Home Department,—No. 99, dated the 13th May 1861.

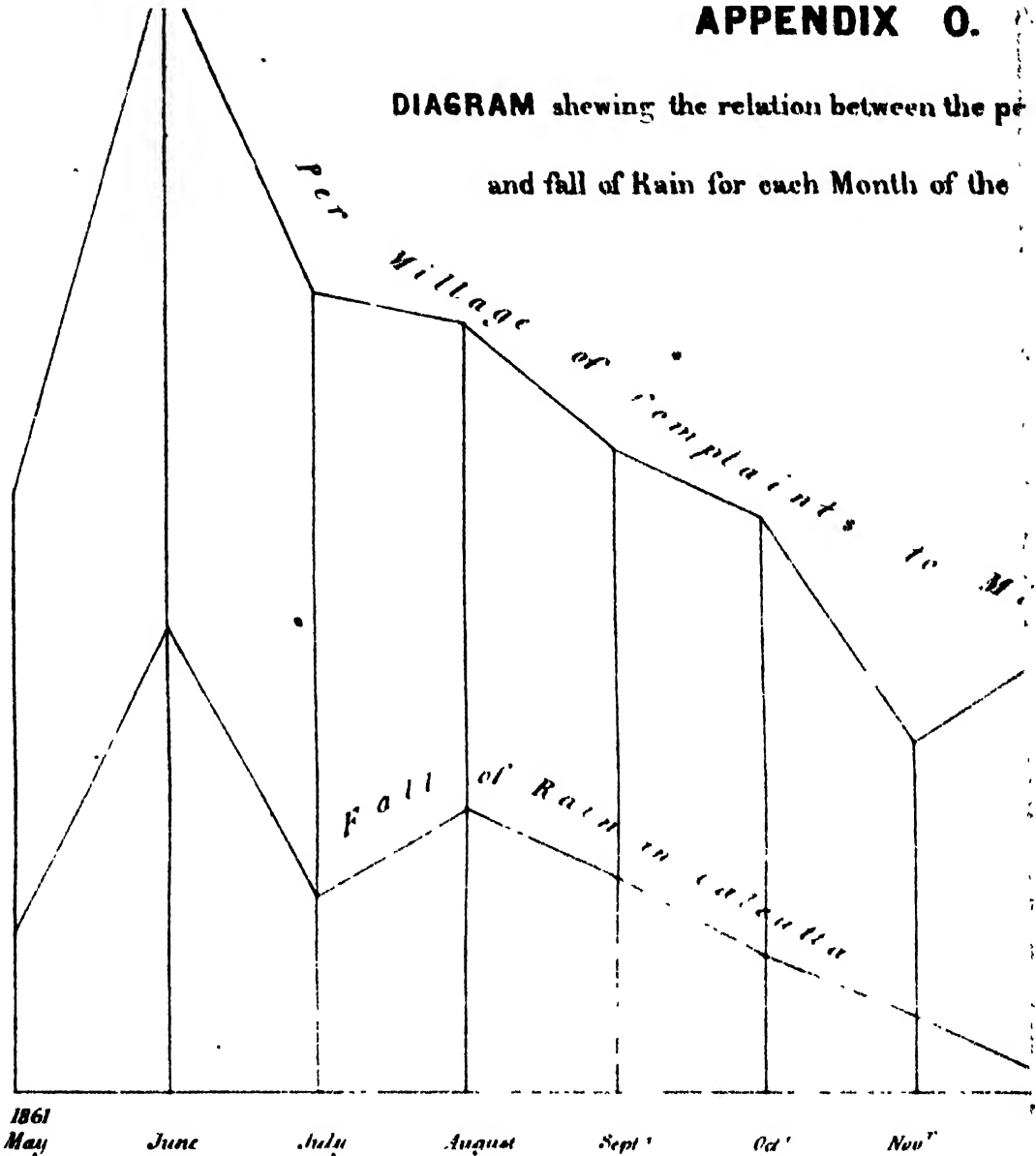
I HAVE the honor to refer the Government to paragraph 4 of my No. 9526 of the 20th April as a probable explanation of the circumstances alluded to in the *Englishman* Newspaper of this day in an article reflecting on the Telegraph Department.

Since writing the above letter, and as a further precaution to ensure the privacy of the Message Examining Branch, I have directed that the room in which the Clerks are employed in this duty shall be effectually separated from the other Offices of the Establishment, and intrusion prevented by lock and key.

I feel no doubt that the messages alluded to in the *Englishman* form a portion of those brought to my notice by the Chamber of Commerce, and to which I directed the attention of Government in the above mentioned letter.

APPENDIX O.

DIAGRAM shewing the relation between the per
and fall of Rain for each Month of the



1861
May

June

July

August

Sept

Oct

Nov

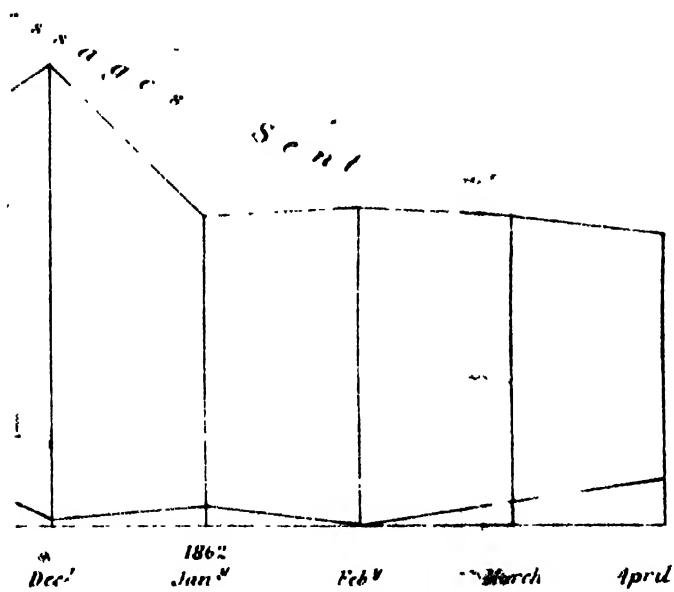
The scale for weather is $\frac{1}{2}$ of an inch for each inch of rain fall.

The scale for Complaints is 1 inch for each Complaint per 1000 Messages

11TH BY H. M. SMITH, SURV. GENL'S OFFICE

Percentage of complaints,

Year 1861-62.



1.

E LALCUTTA NO 1 1862

APPENDIX P.

Extract from the "Annales Télégraphiques" published in Paris in February 1862, page 97.

"Adresser des dépêches. M. le directeur général des lignes télégraphiques vient d'adresser aux présidents des Chambres de commerce la lettre suivante, relative à l'adresse des dépêches.

"Paris, le 20th Janvier 1862.

"Monsieur, une tendance chaque jour plus marquée a successivement amené le public à donner aux dépêches télégraphiques des adresses incomplètes. Un grand nombre d'expéditeurs, se reposant sur la notoriété qu'ils attribuent à leurs correspondants, se dispensent d'indiquer la demeure du destinataire, et créent ainsi de sérieux embarras au service télégraphique, tout en compromettant leurs propres intérêts.

"Quelle que soit, en effet, la notoriété d'une personne dans la ville qu'elle habite, il suffit rarement, pour assurer la remise des dépêches qui lui sont destinées, de la designer par son nom. Si ce nom vient à être altéré dans la transmission, ou s'il est porté par d'autres personnes dans le même lieu, l'indication du domicile en est le complément indispensable. Faute d'une précaution aussi naturelle, un grand nombre de dépêches, arrêtées au bureau d'arrivée, ne parviennent à destination qu'après un long délai, et alors qu'elles sont devenues inutiles. Les recherches même sont souvent infructueuses, et il peut arriver qu'une dépêche destinée à un négociant soit remise à un concurrent du même nom.

"A diverses reprises, ces difficultés avaient appelé mon attention, mais je devais surtout m'en préoccuper au moment où l'abaissement du tarif détermine une augmentation considérable dans le nombre des dépêches, et où je dois avant tout, pour assurer l'ordre dans le service, en écarter toutes les causes d'incertitude et d'embarras. Aussi me paraît-il important que le public n'ignore pas que l'administration ne peut assurer la remise des correspondances que si l'adresse porte expressément la rue et le numéro de l'habitation du destinataire, et qu'il ne serait pas fondé à se plaindre, si, en l'absence de ces renseignements, les dépêches ne parvenaient pas à destination."

"J'ai l'honneur, Monsieur, de vous prier de vouloir bien communiquer ces explications aux diverses personnes dont les intérêts vous sont confiés et auxquelles il peut être utile de connaître les conditions où se trouve, à cet égard, le service télégraphique."

APPENDIX Q.

Approximate Statement of the quantity and value of Stores sent from England for the use of the Department during the Year 1861-62.

NAMES OF STORES.	Number or quantity.	Invoice rate.	Per.	AMOUNT.			
				As per invoice.		At 2s. per Rupee.	
		£ s. d.		£ s. d.		Rs. As. P.	
Hamilton's Posts complete, No.	89,000	1 10 0	each.	133,500 0 0		1,335,000 0 0	
Anchors and Stays for ditto, "	500	0 11 7	"	289 11 8		2,895 13 4	
Couplings for ditto, "	1,000	1 4 6	"	1,225 0 0		12,250 0 0	
Wooden Poles for ditto, "	83,100	0 3 0	"	12,465 0 0		124,050 0 0	
Insulators, "	108,000	0 1 9	"	9,850 0 0		98,500 0 0	
Brackets, "	206,000	0 0 10	"	8,583 6 8		85,833 5 4	
Cast Iron Caps, "	88,000	0 0 8	"	2,933 6 8		29,333 5 4	
Wire Iron No 5, Tons	413.7-2-15	21 0 0	ton.	8,681 0 4		86,811 0 2	
Ditto small, "	1-0-18	27 15 0	"	27 19 6		275 9 4	
Digney's Instrument, No	140	16 12 0	each.	2,324 0 0		23,244 0 0	
Total English cost...						1,798,793 2 0	
Add { Packing cases						31,000 0 0	
Freight						304,965 12 0	
Total Cost						2,134,758 14 6	

APPENDIX R.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to
A. M. MONTEATH, Esquire, Under Secretary to the Government of India, Home Department,
—No. 1263, dated the 20th August 1861.

IN compliance with the orders of Government, in the Financial Department, No. 5039 of the 24th April last, and in reply to your No. 926 of the 8th May, I submit a revised Schedule of the Establishment of this Department shewing a total monthly net saving of Rupees 2,096-5-6 which takes into account the increase of Rupees 250 per month, lately sanctioned by the Government, to the salary of the Compiler of Departmental Accounts.

2. It will be seen that the principal reductions have been consequent on the abolition of the grade of European artificer and the substitution of a grade of mounted Native Artificers in lieu of the present Foot Line-Guards and Horse Patrols. As respects the former of these proposals, I consider that as the construction of lines has, as a rule, ceased throughout the Department, the permanent employment of Europeans on the low pay given to the men of this grade employed in the Department is both unnecessary and undesirable. Their temporary employment can be had recourse to whenever extensive construction or reconstruction renders the step desirable. They would in such cases be under the eye and immediate personal control of the Inspector who may have charge of the construction. Their employment in independent charge of sections of lines after construction, removes them from control, and gives them the opportunity of leaving the work entirely to the Natives under them, and of increasing their pay by the large bills they make a point of sending in, and over which neither Deputy Superintendents nor Auditor has any effective control.

3. The line guards are Natives and are employed to patrol sections of the line varying in length from 8 to 12 miles. It can rarely however, be in their power to know when an interruption occurs, except it has arisen from such obvious cause as the breakage of the wires or the falling of its supports; and even on the occurrence of interruptions from such causes, in the larger number of cases, communication is restored, not by the line-guards, but by peons or others, as may be available, sent out from Signal Offices for the purpose who rarely find the line-guards at their posts, or, when present, willing to aid in the manual labor of restoring communication.

4. The above remarks apply also to the establishment of Horse Patrols.

5. In the accompanying correspondence it will be seen that eight out of ten of the Deputy Superintendents consider that both the above classes may be dispensed with. I extract from other letters, not now sent, opinions of three of the number on the uselessness of these men. Mr. Cappel, Deputy Superintendent now in Ceylon and late in charge of the East Coast Circle, in reply to the questions put to him on the subject, remarks:—

“I do not approve of line-guards, and consider the Establishment already recommended would quite provide for the wants of this Circle. In all my experience I can

call to mind no instance of a line-guard having repaired an accident and restored communication, although I at one time gave much thought and time to the endeavour to train to usefulness a body of these men."

6. Mr. Bailey, one of the oldest and most experienced of the Deputy Superintendents and at present in charge of the East Coast Circle, remarks as follows :—

"These patrols are of no use whatever in preventing interruption, and very few of them will do cooly's work in cases of emergency. They are in fact the class of men described on paragraph 5 of the Director General's Circular No. 83 of the 6th instant, as men too idle to earn their livelihood by honest labor who contrive to get attached as peons, &c., to Government Offices, knowing this to be their only chance of getting good pay with the lightest possible work.

"The line patrols, meaning the line-guards, are not only not to be depended upon to repair damages, but they do not even walk regularly over their beats, although the books are passed on from station to station in good time. I have ascertained that the books are often sent on by travellers while the patrol remains in his village, and it is a common practice for the man who draws pay from the Department, and who is supposed to be acquainted with his work, to put a substitute in his place for weeks together

* * * but I submit that a Patrol Establishment is not at all necessary. An Assistant Artificer stationed at each end of the line to go out on horse-back during interruption, and an Inspector or an Artificer to make a regular monthly inspection would keep the line in good order and provide for all emergencies."

7. The following are remarks by Mr. Blissett, Superintendent of Telegraphs Southern Division, on the same subject :—

"Having myself found that they (Horse and Foot Patrols) were not available or forthcoming for the performance of the duties required of them when interruption occurred, and many of this body having been discharged for such neglect of their duties on particular and pressing occasions, I endorse the opinion expressed by Mr. Bailey regarding their utter uselessness."

8. The Deputy Superintendent of Pegu, however, considers it absolutely necessary that a small number of line-guards should be appointed to patrol the portion of line crossing the Arracan mountains. Considering the reported difficulties of travelling over this section of the lines, and in absolute personal ignorance of the nature of the country, I have considered it prudent for the present to allow a limited number for this duty; my proposal is, with this exception to dispense with the entire of the present establishment of foot line-guards and horse patrols.

9. The Tabular Statement will shew that I have provided for the more efficient conservancy of the lines by increasing the number and pay of Inspectors, and by appointing a sufficiency of Native Artificers to admit of one being stationed at every Telegraph Office in India with ten additional to provide for casualties. Under the present arrangements the line-guards and horse patrols are placed under the orders of the Inspector in charge of the portions of line on which they are employed. By the proposed plan the new class of mounted line guards will be under the immediate orders of the Assistant in

charge of each Office, who alone can know when an interruption occurs. They will reside in the Office and will be prepared to proceed on the line immediately an interruption becomes known; and as the average interval between Office is 70 miles, the new line guards, who will be sent from each end of the line to restore communication, should, under the most unfavorable circumstance, viz., that of the interruption occurring in the centre of the interrupted section, be able to do so on the day the interruption takes place, or early on the following day should the interruption have commenced late on the previous afternoon.

10. These new line-guards will simply restore communication, obtaining assistance for this purpose when necessary from the nearest village. The permanent repairs, of whatever nature they may be, will be left to the Inspector in charge of the division, who, on return of the Artificer to his station, will be immediately informed by the Assistant in charge of what has taken place, the position of the accident, and the means used to restore communication by Native Artificers. The Assistants in charge of Offices, having the sole control over these new line artificers, will be held responsible for the rapid restoration of communication, but not for the permanent repair of the line, which will remain, as at present, in the hands of the Inspectors. * * * *

11. A reduction of upwards of Rupees 1,077-8-0 monthly is proposed in the establishment of Office peons. The number of this class employed is in most Offices disproportionate to the work to be done; they are also in many instances improperly employed as private servants, and are paid a higher rate than is necessary to secure the services of men of their class.

12. I have taken advantage of the reduction of expenditure amounting to Rupees 13,459-13-6 monthly to propose an increase to the pay of the Signallers and Officers in the higher grades. This latter part of the proposal I consider of much importance to the interests of the Department. A reference to the rates of pay given in other branches of the public service to Officers having duties of similar responsibility, will, I think, satisfy the Government that the remuneration of the superior Officers of this Department is below the average rates. The Office labor and money responsibility of the Deputy Super-

	Miles of Line.	Persons employed.
Punjab ...	1,532	300
Bombay ...	1,247	314
East Coast ...	1,180	312
Central India ...	1,174	300
Madras ...	1,030	377
Indore ...	735	153
Kande ...	640	172
Poona ...	628	220
Pegu ...	480	118
South-East Coast ...	152	20
Total ...	8,838	2,395

intendent of a Circle may be judged of from the following particulars respecting the Bengal Circle. That Circle comprises 1,728 miles of line with an establishment of 578 persons of all classes, and payments averaging monthly Rupees 39,487, accounts current with persons involving correspondence of 673 letters sent and received during the same period. The length of line and approximately the proportional labor and responsibility devolving on the Deputy Superintendents of the other Circles is shewn in the margin. Under the existing scale of salaries, the highest pay such Officers can receive is Rupees 500 per mensem.

13. The pay of the various grades below that of Deputy Superintendent also appears to me to require increase, especially in the lowest grade, viz., that of 3rd class Inspector, which includes several Morse Assistants, in which the pay is Rupees 100 monthly, the amount these assistants drew on landing in India 4½ years ago. Such pay does not permit of anything being economised to meet the heavy expenses of a sick furlough to England, and even scarcely permits respectable existence in India.

14. The joint effect of the indifferent prospect offered by the higher grades, and of the insufficient pay of some of the lower grades, has, I believe, been to deprive the Department of many good men,—25 per cent. of the total number of Morse Assistants sent out from England having already resigned, some to return home, but the greater portion to take other appointments in India, and there are others still in the Department who, to my knowledge, wait a favorable opportunity for leaving it. This tendency to seek employment elsewhere would be lessened and higher efficiency secured were there a prospect for deserving men eventually to rise to a liberally paid appointment, even though the prospect of doing so were distant. The scale I have prepared will, I consider, meet this want.

15. The scheme also embraces a new nomenclature. It is proposed to style the present "Superintendents of Divisions" "Directors," and the present "Deputy Superintendents of Circles" "Superintendents." In the origin of the Department, when its Head was termed "Superintendent," there was fitness in calling the Officers next to him in rank, and who then had charge of Circles, "Deputy Superintendents." Since the alteration in the Title of the Head of the Department to "Director General," and the introduction of a grade intermediate, and like the head of the Department without executive charge, these latter have become the Deputies of the Director General, and I think may appropriately be termed "Directors." The Officers in executive charge of Circles in no respect act as Deputies to the present Superintendents, indeed while there are ten of the former there are three only of the latter. I consider, therefore, that even were the designation "Superintendent" retained for the three Officers in charge of Divisions, that of the Deputy Superintendents would still be an inappropriate designation for the Chief Officers of Circles. The former, I therefore propose terming "Directors," and the latter "Superintendents." The Officers next below the Superintendents of Circles being their personal Assistants, will be appropriately termed Assistant Superintendents. In the grades of Inspectors the nomenclature has been simplified, the terms 1st Class, 2nd Class A, 2nd Class B, and 3rd Class Inspectors having been changed into 1st, 2nd, 3rd and 4th, Inspectors.

16. The proposed arrangements of an Assistant to every Deputy Superintendent is, I consider, a most important feature of my scheme. The Deputy or his Assistant should be at all times on the line inspecting the various Offices and the arrangements of the line Officers, and I believe the present inability of the Deputy Superintendents to do this to be one of the chief causes of the frequent bad working of the lines. At present the time of Deputy Superintendents is exclusively occupied in their Offices, and a hurried tour, not always once a year over a limited portion of the lines, is the utmost

they can devote to the important duty of inspection; but with the aid of an Assistant, whose duty will be exclusively to assist the Deputy Superintendent, the latter will be able to exercise considerably more supervision over his Offices than has hitherto been the case. He will then be able to acquaint himself with the character of his subordinates; check irregularities in his Circle; insure a more constant vigilance over the lines; and thereby considerably lessen the chances of interruption.

17. The scale proposed gives two Superintendents, in excess of the number necessary to give one to each Circle,—one of these I propose shall be the personal Assistant to the Director General, and the other the Superintendent of Stores. There are besides three extra Superintendents, the duties I would propose for whom would be to fill temporary vacancies in the higher grades, to take charge of the important Offices of Complaint, Fault and Cash Collection examination, and to furnish a special Officer for construction when such is in progress, or for any other special duties that may be required, or for any experiments the Director General may find it in the interest of the Department to make.

18. I do not propose to increase salaries immediately to the full rates suggested, thinking it better that increases should be progressive. The result will be to reduce the increase of expenditure shewn on the present scale by about Rupees 2,000 monthly during the present year, making the net saving accruing to Government by the proposal Rupees 4,905-5-6, instead of Rupees 2,906-5-6, as shewn in paragraph 1.

19. Some explanation seems desirable respecting the manner in which I have arrived at the numbers proposed for the various grades. In this I have been to a considerable extent controlled by what I found existing. The grades of Inspectors have been arranged so as to include in the 4th class all Assistants in charge of Offices on salaries exceeding Rupees 120 a month, and all Morse Assistants, several of whom are already stated drawing Rupees 100 monthly. Again in the grade of Signallers it was, as a rule, necessary so to arrange the numbers of the grades as to bring all who might be drawing salaries intermediate between two consecutive rates into the higher of the two rates; perhaps an example will place this in a clearer light. The 2nd and 3rd grades of pay proposed for the Signalling Branch are Rupees 100 and 80. The grade at Rupees 100 pay will comprise 30 persons, of whom 17 are now drawing Rupees 100, two Rupees 99, one Rupees 96, three Rupees 91, three Rupees 90, also two drawing Rupees 80, one drawing 79, and one drawing 76. Similarly the proposed grade on Rupees 70 will also comprise 30 persons, of whom 7 are now drawing Rupees 74; this being the only instance, however, of persons being included in a grade the pay of which is under what they are already receiving.

20. In this case the excess must be continued to them, as a personal allowance, until their turn for promotion to a higher grade arrives. The remaining persons included in the 70 Rupee grade are, 20 already drawing Rupees 64, one drawing Rupees 61, and three drawing Rupees 60. For further particulars I refer you to the Tabular Statement.

21. All promotions in the higher grades of the Department, consequent on the approval of this scheme, should, as at present, be in the hands of Government; but to

avoid the great inconvenience that has during the present year been felt from the necessity of referring to Government all minor Departmental changes, I would suggest that it may be competent for the Director General to make any promotion or changes below the grade of Inspectors he may consider necessary without further reference, provided that such are within the sanctioned limit; and that a copy of his Departmental order may be accepted as sufficient authority for such changes by the Audit Department.

22. I believe that further retrenchments are still practicable, especially under the head of "Cable Guards"; and "Office Servants;" but without more satisfactory data to guide me than I have at present, I have hesitated to make the reductions I could desire.

23. The present alteration in designations have stopped short with the grade of 4th Class Inspectors, but I intend in a future letter to suggest alterations in the nomenclature of the Signalling Branch of the Department, and to revise the "Office allowance" which in many instances admit of considerable reduction, and the appointment of Assistants to the present Assistants in charge of Offices on the same principle as that of the Assistants to the Officers in charge of Circles. These Assistants will be selected from the present Establishment of Signallers and remunerated from the savings effected in the revision of the "Office allowance." This arrangement will admit of a responsible person being constantly on duty in Signal Offices which under existing circumstances is physically impossible, the Offices being open day and night throughout the year, and having but one responsible person in charge.

24. From the materials which it was necessary to collect, to mature this scheme of re-organization, it will be easy to prepare lists of the Establishments proper for the various Signal Offices, which will be done on receipt of the Government approval, modified or otherwise, of these proposals.

TABULAR STATEMENT.

[illegible]

NATURE OF CHANGE.				PROPOSITION, PERMANENT				ORDERS OF THE GOVERNMENT OF INDIA.	
Present Scale.				Proposed Scale				Home Department.	Financial Department.
Brought forward				Brought forward				Remarks.	Remarks.
Signalers and Assistants.				Signalers and Assistants.					
1	Ditto	at 140 0 0	180 0 0	23,700 0 0	Rs. As. P.	34,500 0 0	Rs. As. P.	0 0 0	
2	Ditto	at 150 0 0	360 0 0						
3	Ditto	at 160 0 0	1,080 0 0						
4	Ditto	at 170 0 0	1,240 0 0						
5	Ditto	at 180 0 0	1,360 0 0						
6	Ditto	at 190 0 0	1,530 0 0						
7	Ditto	at 200 0 0	1,700 0 0						
8	Ditto	at 210 0 0	1,880 0 0						
9	Ditto	at 220 0 0	2,080 0 0						
10	Ditto	at 230 0 0	2,290 0 0						
11	Ditto	at 240 0 0	2,520 0 0						
12	Ditto	at 250 0 0	2,770 0 0						
13	Ditto	at 260 0 0	3,040 0 0						
14	Ditto	at 270 0 0	3,330 0 0						
15	Ditto	at 280 0 0	3,640 0 0						
16	Ditto	at 290 0 0	3,970 0 0						
17	Ditto	at 300 0 0	4,320 0 0						
18	Ditto	at 310 0 0	4,690 0 0						
19	Ditto	at 320 0 0	5,080 0 0						
20	Ditto	at 330 0 0	5,490 0 0						
21	Ditto	at 340 0 0	5,920 0 0						
22	Ditto	at 350 0 0	6,370 0 0						
23	Ditto	at 360 0 0	6,840 0 0						
24	Ditto	at 370 0 0	7,330 0 0						
25	Ditto	at 380 0 0	7,840 0 0						
26	Ditto	at 390 0 0	8,370 0 0						
27	Ditto	at 400 0 0	8,920 0 0						
28	Ditto	at 410 0 0	9,490 0 0						
29	Ditto	at 420 0 0	10,080 0 0						
30	Ditto	at 430 0 0	10,690 0 0						
31	Ditto	at 440 0 0	11,320 0 0						
32	Ditto	at 450 0 0	11,970 0 0						
33	Ditto	at 460 0 0	12,640 0 0						
34	Ditto	at 470 0 0	13,330 0 0						
35	Ditto	at 480 0 0	14,040 0 0						
36	Ditto	at 490 0 0	14,770 0 0						
37	Ditto	at 500 0 0	15,520 0 0						
38	Ditto	at 510 0 0	16,290 0 0						
39	Ditto	at 520 0 0	17,080 0 0						
40	Ditto	at 530 0 0	17,890 0 0						
41	Ditto	at 540 0 0	18,720 0 0						
42	Ditto	at 550 0 0	19,570 0 0						
43	Ditto	at 560 0 0	20,440 0 0						
44	Ditto	at 570 0 0	21,330 0 0						
45	Ditto	at 580 0 0	22,240 0 0						
46	Ditto	at 590 0 0	23,170 0 0						
47	Ditto	at 600 0 0	24,120 0 0						
48	Ditto	at 610 0 0	25,090 0 0						
49	Ditto	at 620 0 0	26,080 0 0						
50	Ditto	at 630 0 0	27,090 0 0						
51	Ditto	at 640 0 0	28,120 0 0						
52	Ditto	at 650 0 0	29,170 0 0						
53	Ditto	at 660 0 0	30,240 0 0						
54	Ditto	at 670 0 0	31,330 0 0						
55	Ditto	at 680 0 0	32,440 0 0						
56	Ditto	at 690 0 0	33,570 0 0						
57	Ditto	at 700 0 0	34,720 0 0						
58	Ditto	at 710 0 0	35,890 0 0						
59	Ditto	at 720 0 0	37,080 0 0						
60	Ditto	at 730 0 0	38,290 0 0						
61	Ditto	at 740 0 0	39,520 0 0						
62	Ditto	at 750 0 0	40,770 0 0						
63	Ditto	at 760 0 0	42,040 0 0						
64	Ditto	at 770 0 0	43,330 0 0						
65	Ditto	at 780 0 0	44,640 0 0						
66	Ditto	at 790 0 0	45,970 0 0						
67	Ditto	at 800 0 0	47,320 0 0						
68	Ditto	at 810 0 0	48,690 0 0						
69	Ditto	at 820 0 0	50,080 0 0						
70	Ditto	at 830 0 0	51,490 0 0						
71	Ditto	at 840 0 0	52,920 0 0						
72	Ditto	at 850 0 0	54,370 0 0						
73	Ditto	at 860 0 0	55,840 0 0						
74	Ditto	at 870 0 0	57,330 0 0						
75	Ditto	at 880 0 0	58,840 0 0						
76	Ditto	at 890 0 0	60,370 0 0						
77	Ditto	at 900 0 0	61,920 0 0						
78	Ditto	at 910 0 0	63,490 0 0						
79	Ditto	at 920 0 0	65,080 0 0						
80	Ditto	at 930 0 0	66,690 0 0						
81	Ditto	at 940 0 0	68,320 0 0						
82	Ditto	at 950 0 0	69,970 0 0						
83	Ditto	at 960 0 0	71,640 0 0						
84	Ditto	at 970 0 0	73,330 0 0						
85	Ditto	at 980 0 0	75,040 0 0						
86	Ditto	at 990 0 0	76,770 0 0						
87	Ditto	at 1000 0 0	78,520 0 0						
88	Ditto	at 1010 0 0	80,290 0 0						
89	Ditto	at 1020 0 0	82,080 0 0						
90	Ditto	at 1030 0 0	83,890 0 0						
91	Ditto	at 1040 0 0	85,720 0 0						
92	Ditto	at 1050 0 0	87,570 0 0						
93	Ditto	at 1060 0 0	89,440 0 0						
94	Ditto	at 1070 0 0	91,330 0 0						
95	Ditto	at 1080 0 0	93,240 0 0						
96	Ditto	at 1090 0 0	95,170 0 0						
97	Ditto	at 1100 0 0	97,120 0 0						
98	Ditto	at 1110 0 0	99,090 0 0						
99	Ditto	at 1120 0 0	101,080 0 0						
100	Ditto	at 1130 0 0	103,090 0 0						
101	Ditto	at 1140 0 0	105,120 0 0						
102	Ditto	at 1150 0 0	107,170 0 0						
103	Ditto	at 1160 0 0	109,240 0 0						
104	Ditto	at 1170 0 0	111,330 0 0						
105	Ditto	at 1180 0 0	113,440 0 0						
106	Ditto	at 1190 0 0	115,570 0 0						
107	Ditto	at 1200 0 0	117,720 0 0						
108	Ditto	at 1210 0 0	119,890 0 0						
109	Ditto	at 1220 0 0	122,080 0 0						
110	Ditto	at 1230 0 0	124,290 0 0						
111	Ditto	at 1240 0 0	126,520 0 0						
112	Ditto	at 1250 0 0	128,770 0 0						
113	Ditto	at 1260 0 0	131,040 0 0						
114	Ditto	at 1270 0 0	133,330 0 0						
115	Ditto	at 1280 0 0	135,640 0 0						
116	Ditto	at 1290 0 0	137,970 0 0						
117	Ditto	at 1300 0 0	140,320 0 0						
118	Ditto	at 1310 0 0	142,690 0 0						
119	Ditto	at 1320 0 0	145,080 0 0						
120	Ditto	at 1330 0 0	147,490 0 0						
121	Ditto	at 1340 0 0	149,920 0 0						
122	Ditto	at 1350 0 0	152,370 0 0						
123	Ditto	at 1360 0 0	154,840 0 0						
124	Ditto	at 1370 0 0	157,330 0 0						
125	Ditto	at 1380 0 0	159,840 0 0						
126	Ditto	at 1390 0 0	162,370 0 0						
127	Ditto	at 1400 0 0	164,920 0 0						
128	Ditto	at 1410 0 0	167,490 0 0						
129	Ditto	at 1420 0 0	170,080 0 0						
130	Ditto	at 1430 0 0	172,690 0 0						
131	Ditto	at 1440 0 0	175,320 0 0						
132	Ditto	at 1450 0 0	177,970 0 0						
133	Ditto	at 1460 0 0	180,640 0 0						
134	Ditto	at 1470 0 0	183,330 0 0						
135	Ditto	at 1480 0 0	186,040 0 0						
136	Ditto	at 1490 0 0	188,770 0 0						
137	Ditto	at 1500 0 0	191,520 0 0						
138	Ditto	at 1510 0 0	194,290 0 0						
139	Ditto	at 1520 0 0	197,080 0 0						
140	Ditto	at 1530 0 0	199,890 0 0						
141	Ditto	at 1540 0 0	202,720 0 0						
142	Ditto	at 1550 0 0	205,570 0 0						
143	Ditto	at 1560 0 0	208,440 0 0						
144	Ditto	at 1570 0 0	211,330 0 0						
145	Ditto	at 1580 0 0	214,240 0 0						
146	Ditto	at 1590 0 0	217,170 0 0						
147	Ditto	at 1600 0 0	220,120 0 0						
148	Ditto	at 1610 0 0	223,090 0 0						
149	Ditto	at 1620 0 0	226,080 0 0						
150	Ditto	at 1630 0 0	229,090 0 0						
151	Ditto	at 1640 0 0	232,120 0 0						
152	Ditto	at 1650 0 0	235,170 0 0						
153	Ditto	at 1660 0 0	238,240 0 0						
154	Ditto	at 1670 0 0	241,330 0 0						
155	Ditto	at 1680 0 0	244,440 0 0						
156	Ditto	at 1690 0 0	247,570 0 0						
157	Ditto	at 1700 0 0	250,720 0 0						
158	Ditto	at 1710 0 0	253,890 0 0						
159	Ditto	at 1720 0 0	257,080 0 0						
160	Ditto	at 1730 0 0	260,290 0 0						
161	Ditto	at 1740 0 0	263,520 0 0						
162	Ditto	at 1750 0 0	266,770 0 0						
163	Ditto	at 1760 0 0	270,040 0 0						
164	Ditto	at 1770 0 0	273,330 0 0						
165	Ditto	at 1780 0 0	276,640 0 0						
166	Ditto	at 1790 0 0	280,000 0 0						
167	Ditto	at 1800 0 0	283,330 0 0						
168	Ditto	at 1810 0 0	286,690 0 0						
169	Ditto	at 1820 0 0	290,080 0 0						
170	Ditto	at 1830 0 0	293,490 0 0						
171	Ditto	at 1840 0 0	296,920 0 0						
172	Ditto	at 1850 0 0	300,370 0 0						
173	Ditto	at 1860 0 0	303,840 0 0						
174	Ditto	at 1870 0 0	307,330 0 0						
175	Ditto	at 1880 0 0	310,840 0 0						
176	Ditto	at 1890 0 0	314,370 0 0						
177	Ditto	at 1900 0 0	317,920 0 0						
178	Ditto	at 1910 0 0	321,490 0 0						
179	Ditto	at 1920 0 0	325,080 0 0						
180	Ditto	at 1930 0 0	328,690 0 0						
181	Ditto	at 1940 0 0	332,320 0 0						
182	Ditto</								

ORDERS OF THE GOVERNMENT OF INDIA.		NATURE OF CHANGE		PROPOSITION, PERMANENT		Grounds of Proposition.		Home Department.		Home Department.	
								Remarks.		Remarks.	
								Particulars.		Orders.	

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ORDERS OF THE GOVERNMENT OF INDIA.									
NATURE OF CHANGE.									
PROPOSITION, PERMANENT.									
Grounds of Proposition.									
Orders.									
Remarks.									
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Home Department.									
Remarks.									
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Rs. As P.									
Rs. As P.</									

[illegible]

ORDERS OF THE GOVERNMENT OF INDIA.		NATURE OF CHANGE.		PROPOSITION, PERMANENT.		Grounds of Proposition.	
Office to which the proposition refers.		Office to which the proposition refers.		Office to which the proposition refers.		Office to which the proposition refers.	
Date.	Particulars.	Present Scale.	Proposed Scale.	Increase per month.	Decrease per month.	Home Department.	Financial Department.
	Brought forward ...	Rs. As. P. 81,301 13 6	Rs. As. P. 79,755 0 0	Rs. As. P. 10,546 8 0	Rs. As. P. 12,213 5 6		
	<i>Under Director General's Office Establishment as follows —</i>						
	1 Head Clerk	100 0 0	100 0 0				
	1 Deputy Clerk	80 0 0	80 0 0				
	1 Examiner and Inspector	90 0 0	90 0 0				
	1 Deputy Clerk	30 0 0	30 0 0				
	2 Ditto at 25	50 0 0	50 0 0				
	2 Ditto at 20	40 0 0	40 0 0				
	8	420 0 0	420 0 0				
	<i>Three Directors' Office Establishments as follows —</i>						
	1 Head Clerk	100 0 0	100 0 0				
	2 Ditto at 80	160 0 0	160 0 0				
	3 Clerks at 30 each	90 0 0	90 0 0				
	3	350 0 0	350 0 0				
	11	770 0 0	770 0 0				
	Brought forward ...	Rs. As. P. 81,301 13 6	Rs. As. P. 79,755 0 0	Rs. As. P. 10,546 8 0	Rs. As. P. 12,213 5 6		
	<i>Under Director General's Office Establishment as follows —</i>						
	1 Head Clerk	100 0 0	100 0 0				
	1 Deputy Clerk	80 0 0	80 0 0				
	1 Examiner and Inspector	90 0 0	90 0 0				
	1 Deputy Clerk	30 0 0	30 0 0				
	2 Ditto at 25	50 0 0	50 0 0				
	2 Ditto at 20	40 0 0	40 0 0				
	8	420 0 0	420 0 0				
	<i>Three Directors' Office Establishments as follows —</i>						
	1 Head Clerk	100 0 0	100 0 0				
	2 Ditto at 80	160 0 0	160 0 0				
	3 Clerks at 30 each	90 0 0	90 0 0				
	3	350 0 0	350 0 0				
	11	770 0 0	770 0 0				

Three First Class Circle Superintendents Office Establishments each as follows —		Three First Class Circle Superintendents Office Establishments each as follows —		Three First Class Circle Superintendents Office Establishments each as follows —	
1	Accountant	100	0	0	
1	Asst. Accountant	50	0	0	
1	Bill Examiner	40	0	0	
1	Copying Clerk	25	0	0	
1	Asst. Bill Examiner	20	0	0	
1	Clerk	15	0	0	
1	Correspondence	60	0	0	
1	Clerk	35	0	0	
1	Dicta	40	0	0	
1	Dicta	12	0	0	
10		857	0	0	
84		84			
30					
1	Four Second Class Superintendents Office Establishments each as follows —				
1	Accountant	100	0	0	
1	Asst. Accountant	40	0	0	
1	Bill Examiner	30	0	0	
1	Copying Clerk	20	0	0	
1	Correspondence	50	0	0	
1	Clerk	30	0	0	
1	Dicta	25	0	0	
7		235	0	0	
84		84			
15					
1	Three Third Class Circle Superintendents Office Establishments each as follows —				
1	Accountant	100	0	0	
1	Asst. Accountant	30	0	0	
1	Copying Clerk	40	0	0	
1	Clerk	25	0	0	
1	Dicta	20	0	0	
7		215	0	0	
84		84			
15					
Carried over		8,116	0	0	
Carried over		99,417	5	6	
Carried over		3,204	0	0	
Carried over		79,755	0	0	
Carried over		10,006	6	0	
Carried over		12,213	5	6	

NATURE OF CHANGE.				PROPOSITION, PERMANENT.		Grounds of Proposition.	ORDERS OF THE GOVERNMENT OF INDIA.	
Present Scale.		Proposed Scale.		Increase per month.	Decrease per month.		Home Department.	Financial Department.
Brought forward ...	Rs. As. P. ...	Rs. As. P. 89,417 5 6	Brought forward ...	Rs. As. P. 3,806 0 0	Rs. As. P. 79,755 0 0	Rs. As. P. 10,088 8 0	Rs. As. P. 12,213 5 6	
<i>Cikula Signal Office Establishment.</i>								
			1 Receiving Clerk	50 0 0				
			1 Ditto	40 0 0				
			1 Ditto	30 0 0				
			1 Ditto	25 0 0				
			1 Ditto	20 0 0				
			2 Copying Clerks at 40 each	80 0 0				
			1 Despatching ditto	35 0 0				
			1 Ditto	30 0 0				
			1 Accountant	35 0 0				
			1 Ditto	30 0 0				
			11	375 0 0				
<i>Bombay Signal Office Establishment.</i>								
			1 Receiving Clerk	40 0 0				
			1 Ditto	35 0 0				
			1 Ditto	30 0 0				
			1 Ditto	25 0 0				
			2 Copying Clerks at 40 each	80 0 0				
			1 Despatching Clerk	35 0 0				
			1 Ditto	30 0 0				
			1 Accountant	35 0 0				
			1 Ditto	20 0 0				
			10	330 0 0				

Madras Signal Office Establishment.

1 Receiving Clerk	35 0 0
1 Ditto	30 0 0
1 Ditto	26 0 0
1 Copying Clerk	35 0 0
1 Ditto	30 0 0
1 Ditto	26 0 0
1 Ditto	20 0 0
1 Accountant	35 0 0
1 Ditto	20 0 0
9	255 0 0

1 Writers for each of the following Offices—Bengal, Madras, and Central India, at 30 each

30 each	120 0 0
---------	---------

20 Writers for 1st Class Inspectors, at 30 each

24 **720 0 0**

Calcutta Store Department.

1 Writer at 40	40 0 0
1 Ditto at 25	25 0 0
2 Ditto at 20	40 0 0
1 Ditto at 16	16 0 0
5	121 0 0

Cook Checkers.

1 at 40	40 0 0
6 at 20	120 0 0
7	160 0 0

Complaint Branch.

1 at 70	70 0 0
2 at 30	60 0 0
1 at 25	25 0 0
1 at 25	25 0 0
2 at 20	40 0 0
1 at 20	20 0 0
9	240 0 0

Carried over	...	83,417 5 6	...	Carried over	...	6,107 0 0	78,525 0 0	10,888 8 0	12,213 5 6
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(Signed) · C. DOUGLAS, *Lieut.-Col.,
Offg. Director General of Tels. in India.*

**CALCUTTA, DIRECTOR GENERAL'S OFFICE ; }
The 20th April 1861.**

ABSTRACT.

SAVINGS.				Rs.	As.	P.	Rs.	As.	P.
From European Artificers, Line Guards and Horse Patrols after deduction of the cost of the new Line Establishment intended to replace them									
..	10,602	5	8		
.. Inspectors' Peons	51	0	0		
.. Office Peons	1,077	8	0		
.. " Bearers	233	0	0		
.. " Bhoeetles	101	0	0		
.. " Sweepers	96	8	0		
.. Tent Lascars	12	0	0		
.. Chowkedars and Durwans	15	0	0		
.. Bill Collectors	8	0	0		
.. Flag Staff and Watchmen	7	0	0		
.. Batterymen	11	0	0		
.. Writers	1,112	8	0		
.. Duffries	3	0	0		
.. Gardeneers	82	0	0		
.. Horse-keepers and Grass-cutters	40	0	0		
.. Printing Offices	214	0	0		
							13,673	13	6

PROPOSED INCREASES.

To Establishment—

2 4th Class Superintendents at 100	...	...	...	800	0	0
3 Extra Superintendents at 350	...	...	...	1,050	0	0
4 Assistant Superintendents	...	...	...	1,150	0	0
15 Inspectors	...	...	...	4,750	0	0
17 Signallers	...	...	...	790	8	0
6 Cable Guards	...	...	...	14	0	0
7 Lithographers	...	...	...	101	0	0

To Present Salaries—

To	Superintendent of Division	...	...	...	1,000	0	0	
..	Deputy Superintendents of Circles	...	...	..	1,100	0	0	
..	Boatman	...	...	...	3	0	0	
								10,767 8 0
	Net savings per month	..						2,906 5 0
								13,673 13 0

APPENDIX

Return of Collections in Cash and Stamps on Service and Private Mail

N. B.—This Return does not include Cash received to credit of any Lines, other than those belonging to the business, nor the *pro forma* Charges for such of the Mail.

CIRCLES.	COLLECTIONS IN 1861-62.			COLLECTIONS IN 1860-61.		
	Service.	Private.	Total.	Service.	Private.	Total.
	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Bengal ...	40,692 11 6	1,61,955 14 0	2,02,648 9 6	39,812 0 8	1,46,032 8 8	1,85,844 8 8
Bombay ...	19,619 9 8	1,50,071 8 6	1,69,720 12 9	16,720 11 9	1,48,410 8 4	1,65,130 10 1
Madras ...	14,498 10 2	72,228 8 6	86,727 2 8	15,430 15 2	69,673 12 3	85,103 17 5
Punjab ...	28,501 11 0	30,998 9 6	59,499 4 6	23,915 1 8	31,637 15 11	55,552 16 9
Central India ...	4,033 13 0	20,055 10 0	24,088 7 0	3,848 12 0	16,141 7 0	19,989 9 0
Pegu ...	3,880 8 6	20,577 11 6	24,457 15 0	4,724 0 8	10,643 10 4	15,367 11 2
Dacca ...	808 1 6	7,777 11 0	8,585 12 6	2,113 13 0	3,972 2 9	6,085 15 9
Indore ...	3,170 3 0	18,239 0 0	21,409 3 0	3,807 12 0	24,204 9 0	28,011 11 0
East Coast ...	4,765 3 0	29,716 5 6	34,481 8 6	2,725 2 8	27,827 4 8	30,552 7 6
Sindh ...	5,488 15 0	12,941 6 6	18,429 5 6	5,469 15 0	12,861 9 0	18,330 12 0
South-East Coast..	209 6 0	5,163 2 6	5,372 8 6	164 12 0	3,325 0 0	3,489 12 0
Ceylon* ...	193 0 6	18,862 9 7	19,055 10 1	808 9 8	11,091 11 8	11,899 21 6
Total Rs. ...	1,25,541 7 5	5,48,582 12 1	6,74,123 8 6	1,19,481 9 5	5,06,721 14 2	6,26,202 13 7

Total of Net Increase on the preceding Office

Per 6

* Being the

ADIX S.

[Telegraph.]

1968 (showing increase and decrease on the preceding year) for 1861-62.

Government of India, nor the Cash payments made by persons in the Department for the Messages they may send on account of the Marine Department as are sent by the River Lines.

NET INCREASE.										NET DECREASE.										CIRCLES.	
Total.			Service.			Private.			Total.			Service.			Private.			Total.			
Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	
814	8	11	860	10	10	15,023	5	9	16,804	0	7	...	...	...	...	...	...	...	...	Bengal
1,170	15	1	2,928	13	6	1,661	0	2	4,589	13	8	...	...	...	...	...	...	...	...	Bombay
1,104	11	5	2,754	12	3	2,554	12	3	932	5	0	932	5	0	Madras
5,503	1	2	4,546	9	9	4,546	9	9	644	6	5	...	644	6	5	Punjab
4,010	3	0	185	1	0	4,914	3	0	5,000	4	0	...	...	...	...	...	...	...	...	Central India
5,367	10	7	9,034	1	2	9,034	1	2	893	12	9	893	12	9	Pegu
6,085	15	9	3,805	8	8	3,805	8	8	1,305	11	6	1,305	11	6	Dacca
8,012	5	0	687	9	0	5,965	9	0	6,603	2	0	Indore
0,5	2	7	4	2,040	0	4	1,889	0	10	3,929	1	2	...	...	...	...	...	...	...	East Coast
8,731	8	0	79	13	6	79	13	6	381	0	0	381	0	0	Sindh
9,389	12	0	44	10	0	1,888	2	6	1,882	12	6	...	...	...	...	...	...	...	...	South-East Coast
2,300	5	4	6,870	13	11	6,870	13	11	115	9	2	115	9	2	Ceylon
5,203	7	7	10,625	13	5	10,470	13	4	60,096	10	9	4,265	15	5	6,609	15	5	10,875	14	10	
year	...	...	6,359	14	0	42,860	13	11	49,220	11	11	...	...	...	...	...	...	...	...
tags	...	...	5	32	...	8	47	...	7	87	...	...	...	...	...	...	...	...	...

due to India by Ceylon.

[Telegraph.]

for year 1861-62.

CONSTRUCTION ACCOUNT.							Grand Total.
DISBURSEMENTS.							
Total.	Construction.	Re-construction.	Total.				
P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.		
	1,01,768 4 9	27,318 6 8	..	27,318 6 8	50,177 3 0		
	14,762 5 1	...	..	..	1,29,054 11 5	
	2,11,632 0 0	...	21,011 0 0	21,011 0 0	14,762 5 1		
	1,11,974 7 4	599 2 6	2,174 1 6	2,773 4 0	2,32,643 0 0		
	94,201 9 3	(d) 50,870 12 8	..	50,870 12 8	1,14,707 11 8		
	81,468 15 7	716 4 0	\$70 0 0	1,116 4 0	1,45,073 5 11		
	15,254 4 9	..	..	..	82,585 8 7	
	72,168 15 6	..	337 14 4	337 14 4	1,53,541 4 9		
	75,491 0 2	...	..	..	72,500 13 4	
	1,95,962 4 3	..	29,973 2 0	29,973 2 0	75,491 0 2		
	1,18,230 0 0	2,350 0 0	71,850 0 0	76,700 0 0	2,25,835 8 3		
	1,17,574 8 3	..	9,602 5 5	9,602 5 5	1,94,930 0 0		
	17,681 4 0	..	..	..	1,27,176 13 8	
	...	..	..	..	17,681 4 0	
	2,14,15,562 1 9	81,841 9 10	1,37,718 7 3	2,19,608 1 1	16,35,165 2 10		

business, it became necessary to include these with the Receipt, and consequently the

APPENDIX V.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 31.

From Major C. DOUGLAS, Officiating Director General of Telegraphs in India, to the Assistant in Charge ——— Office,—Dated Calcutta, the 10th of August 1860—Re-issued the 12th of April 1861.

INSPECTORS and Assistants in charge of Offices are hereby directed to classify their Message Drafts as follows:—

Service Sent.
 „ Transit.
 „ Received.
 Service Confidential Sent.
 „ „ Transit.
 „ „ Received.
 Telegraph Sent—(T. S. Messages.)
 „ Transit.
 „ Received.
 Private Sent.
 „ Transit.
 „ Received.
 News Sent—(Public and Mail).
 „ Transit.
 „ Received.

These reports will be superscribed "*Message drafts*" on the cover, and must be accompanied by a list of the number of each class of Message sent in the subjoined Form given below which has been hypothetically filled up for guidance.

Books containing 100 such Forms with counterfoils will at once be supplied to all Offices.

As a distinguishing mark, covers containing "*Message drafts*" when not on blue coloured paper will have a thick diagonal black ink line ruled across them from the upper left to the lower right hand corner. They will be addressed "*To the Complaint Office, Government Telegraph Department, Calcutta.*"

By "*Confidential Messages*" is meant such *Service Messages* only as are headed "*Confidential*" by the sender. All such will be placed in a separate cover conspicuously

marked "*Confidential Message drafts*" and addressed to the Officiating Director General of Telegraphs in India, and *not* to the Complaint Office, as in the case of ordinary Message drafts.

Message Drafts of the Agra Office for the 7th March 1861.

Nature of Messages.	Sent.	Transit.	Received.	Total.	Remarks respecting Confidential Service Messages.
Service	11	53	4	48	The four Confidential Service Messages were sent to the address of the Officiating Director General on the 8th of March 1861.
„ Confidential	1	3	0	4	
Telegraph (T. S).	14	27	20	61	
Private	165	408	77	740	
News (Public and Mail)	0	1	1	2	

Assistant in Charge.

N. B.—The original Circular should be removed from the Circular Book to make place for this.

GENERAL BRANCH, CIRCULAR No. 108.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to the Assistant in Charge ———— Office,—Dated Calcutta, the 10th of June 1861.

IN view to avoiding the great inconvenience and delay now frequently experienced by the Store-keeper from Morse Instruments being sent in for repair with portions either altogether missing, or in which parts of others have been substituted for those properly belonging to them, it is directed that instruments, when sent to the Store-keeper for repair, shall invariably be complete with all broken parts appertaining to them. After receipt of this Circular should any Instruments be sent of which portions are deficient, the expense of renewing such missing portions will be charged to the Officer sending them in an incomplete state.

Inspectors, or Assistants in charge of Offices, are prohibited from altering any connections or intermixing any portions of different Morse Instruments without the express leave of Superintendents.

The following instances will prove to Superintendents the advantage of insisting on these orders being carried out:—

1st.—A Morse Instrument was returned into Store in January last so destroyed by incompetent persons handling it that it has taken three men 26 days to repair it at a cost of about Rupees 58.

2nd.—During last month two relays, that had been damaged by Lightning at Burdwan, were sent in without being meddled with, and the consequence was they were repaired and returned in 60 hours.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 113.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to the Assistant in Charge ———— Office,—Dated Calcutta, the 19th of July 1861.

CONSIDERABLE time is occupied before replies to complaints of delay in transmission of Messages can be given in consequence of the time occupied by the necessary references to the Offices to which the delay may have been traced, when it is not known to have been occasioned by interruption.

The only source from which the Assistants reply to these references is their Office Log Book.

To avoid the delay referred to, and to enable the Complaint Department to give early replies to complaints of the nature above described, it is directed that whenever any entry is made in the log referring to an unusual delay in the transmission of Messages, caused either by bad working owing to severe weather, or by an interruption either existing or so recently restored that any accumulation of Messages which may have resulted subsequent to the last postal despatch could not have been entirely cleared off, or by delay from Mail news, or long cypher Messages, a copy of *that portion of the log* alluding to such delays must accompany the Message drafts of the day on which the entry is made.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 115.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to the Assistant in Charge ———— Office,—Dated Calcutta, the 6th September 1861.

As an experiment and preparatory to applying to the Government for sanction, the direct Line *vid* Agra between Calcutta and Bombay will be cleared once daily for the transmission of *through* Messages in both directions between those towns; the instruments during the transmission of such *through* Messages working in W. at the Stations of Benares, Agra and Indore, and in D. at all intermediate stations.

Ere, however, any order of this nature can be carried out,—as the same instant of absolute time is represented by very different local times at different places (the

differences between the local times at Bombay and Calcutta being 63 minutes), it becomes necessary, in order to avoid confusion, to adopt one arbitrary time as the Telegraph time for all India.

The most convenient arbitrary time to adopt is such as will keep the difference between it and the local times generally as small as possible.

The Town of Madras, situated, as regards longitude, at a nearly equal distance from Calcutta and Bombay, being the Head Quarters of a Circle, and having besides a Government Observatory, seems peculiarly fitted to give Telegraph time. Its local time will, therefore, for the future be taken as the Telegraph time for all India.

The differences in local time between Madras and every Telegraph Station in India is given in the accompanying Table, not that so extensive a Table is necessary for the object under present consideration, but because it is very desirable that the Department should have a mode of indicating time clear of ambiguity and of all risk of misunderstanding. To enhance the utility and facilitate the application of the Table, the Local times, corresponding to certain Telegraph times, are also given. The number of minutes by which the local Time of each Office is *fast* or *slow* of Telegraph Line, as shewn in the Table, must be noted on the card dial sent to each Office with Circular No. 71 of the 28th October last in the space appropriated for this purpose.

The experiment of through Messages will for the present be confined to the Line between Calcutta and Bombay, and on the result will depend the recommendation or otherwise of its continuance and extension to the Lines between Calcutta and Madras and Madras and Bombay.

The course to be followed in these through Messages will be as follows :—

Assuming that a previous trial has corrected the grosser errors in local time, the Offices on the Line between Calcutta and Bombay will every morning at 7-55 h. of Telegraph time join over for correction of clocks the instruments at the various Stations working as directed in the 1st paragraph; a roll will then be sent along the Line from Calcutta to call attention, and will be continued at intervals until Bombay has answered; the Stations on the Line will now watch for an “attack” from Calcutta, which will be the signal that from the *last* beat of the attack it was 8 h. Telegraph time, and should the clock at any Station not now shew the local time given in the Table, as corresponding to 8 h. Telegraph time, it must be corrected to do so. True local time is thus secured, but as accident may occasionally lead to a delay in the time roll, Calcutta will always follow it up by signalling the hour and minute of Telegraph time at which the *last* beat of the roll was given. Calcutta will immediately afterwards signal at what hour on that day it is intended that the *through* transmission of Telegraph Messages shall begin, which for the present will be at 15 h. Telegraph time.

At 14-55 h. Telegraph time, Stations will again join over for through Messages, and at 15-0h., after a roll has been sent through by Calcutta to Bombay and answered, Calcutta will signal to Bombay the exact hour and minute of Telegraph time at which the *last* beat of the roll was given, after which the transmission of through

Messages will commence, which will be continued until the desk at each end of the line is clear of Messages whether such Messages were received prior to, or after joining over, and irrespective of the time during which it may be necessary to continue such through signalling.

To give full effect to the arrangement, and to enable the mercantile community in whose interest it is made to derive the fullest benefit from it, notice should be circulated of the arrangement, and those proposing to take advantage if it should be advised to have their peons present for the receipt of any answers that may be received to their *through* Messages.

It is obvious that by this arrangement Messages, which at present and under ordinary circumstances occupy several hours in transit, will be transmitted in a few minutes, and that the errors caused by transmission through many repeating Offices will be avoided, and further that much labor will be saved to the Signallers and others in the intermediate Offices.

All Messages tendered at Bombay for transmission to Calcutta, and *vice versa*, during the three hours preceding, that at which the transmission of through Messages is to commence, should be reserved for through transmission, as being pretty certain to reach their destination at an earlier hour than if they had been sent on in due course. They should of course be transmitted in the order in which they are received. But it will be in a Sender's option to have his Message sent on in due course, and without detention for through transmission.

Should this experiment prove successful, it may be found convenient, after the Calcutta and Bombay desks are clear of Messages for each other, to divide the Line at Agra for the receipt there of Messages from Calcutta and Bombay which have to pass through the Agra Office to their destination.

Under this extension of the system, Messages from Calcutta to any place beyond Agra, as Gwalior, Indore, &c., and Messages from Bombay to Delhi, Lahore, Benares, &c., should be detained, until all through Messages have been transmitted, the Line has been divided at Agra; when there will be a similar interchange of Messages between Agra and Calcutta, and Agra and Bombay to that previously carried on between Calcutta and Bombay.

The Assistant in Charge of each Office on the Line must be at the instrument from the moment he joins over until he receives an order from Calcutta to open out, without which order he will on no pretence whatever presume to do so. Any "clear Line" Messages received during the experiment must be held in abeyance until an order from Calcutta has opened the Line. The Assistants in Charge of the Offices at Calcutta, Benares, Agra, Indore and Bombay, which during *through* transmission will be the only Offices whose relays will be brought into action, (all other stations joining over,) must pay particular attention to the state of their relays and Line Batteries which having to send their current unaided to distances, averaging 400 miles, must be in the best possible order.

A detailed Memorandum of instructions on these subjects will follow as soon as the preliminary experiments are concluded.

Table of Comparison between Telegraph Time (Madras Local Time) and Local Time at the various Telegraph Stations in India——Director General's Office, Calcutta, the 6th of September 1851.

To accompany Circular No. 115.

NAMES OF STATIONS.	No. of minutes by which (as compared with Telegraph time) the Local time is	LOCAL TIMES WHICH SHOULD BE SHEWN BY STATION-CLOCKS AT THE UNDERMENTIONED TELEGRAPH TIMES.											
		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.	
		Hours.	Mins.	Hours.	Mins.	Hours.	Mins.	Hours.	Mins.	Hours.	Mins.	Hours.	Mins.
		2	0	2	10	2	20	2	30	2	40	2	50
STATIONS WHOSE LOCAL TIME IS EAST.		EAST.											
Akyah ...	50	2	50	3	0	3	10	3	20	3	30	3	40
Allahabad ...	7	2	7	2	17	2	27	2	37	2	47	2	57
Atcheepore ...	33	2	33	2	43	2	53	3	3	3	13	3	23
Bahsore ...	27	2	27	2	37	2	47	2	57	3	7	3	17
Barackpore ...	33	2	33	2	43	2	53	3	3	3	13	3	23
Benares ...	11	2	11	2	21	2	31	2	41	2	51	3	1
Berhampore (East Coast) ...	14	2	14	2	24	2	34	2	44	2	54	3	4
Bezwarah ...	2	2	2	2	12	2	22	2	32	2	42	2	52
Bhagulpore ...	27	2	27	2	37	2	47	2	57	3	7	3	17
Bimlipatam ...	12	2	12	2	22	2	32	2	42	2	52	3	2
Burdwan ...	31	2	31	2	41	2	51	3	1	3	11	3	21
Burhee ...	21	2	21	2	31	2	41	2	51	3	1	3	11
Calcutta ...	33	2	33	2	43	2	53	3	3	3	13	3	23
Calingapatam ...	15	2	15	2	25	2	35	2	45	2	55	3	5
Cannore ...	1	2	1	2	11	2	21	2	31	2	41	2	51
Chatterpore ...	18	2	18	2	28	2	38	2	48	2	58	3	8
Chinnole ...	15	2	15	2	25	2	35	2	45	2	55	3	5
Chittagong ...	40	2	40	2	50	3	0	3	10	3	20	3	30
Coonada ...	8	2	8	2	18	2	28	2	38	2	48	2	58
Comillah ...	43	2	43	2	53	3	3	3	13	3	23	3	33
Cuttack ...	23	2	23	2	33	2	43	2	53	3	3	3	13
Dacca ...	41	2	41	2	51	3	1	3	11	3	21	3	31
Delree ...	15	2	15	2	25	2	35	2	45	2	55	3	5
Dharwar ...	20	2	20	2	30	2	40	2	50	3	0	3	10
Diamond-Harbour ...	32	2	32	2	42	2	52	3	2	3	12	3	22
Dowlahdwaram ...	7	2	7	2	17	2	27	2	37	2	47	2	57
Furzedpore ...	38	2	38	2	48	2	58	3	8	3	18	3	28
Fyzabad ...	8	2	8	2	18	2	28	2	38	2	48	2	58
Gondah ...	8	2	8	2	18	2	28	2	38	2	48	2	58
Henzadah ...	60	3	0	3	10	3	20	3	30	3	40	3	50
Hoochly-Point ...	33	2	33	2	43	2	53	3	3	3	13	3	23
Jellassore ...	28	2	28	2	38	2	48	2	58	3	8	3	18
Jessore ...	30	2	30	2	40	2	50	3	0	3	10	3	20
Kandy ...	2	2	2	2	12	2	22	2	32	2	42	2	52
Kedgore ...	31	2	31	2	41	2	51	3	1	3	11	3	21
Kookrahatty ...	33	2	33	2	43	2	53	3	3	3	13	3	23
Kyook-Phyoo ...	53	2	53	3	3	3	13	3	23	3	33	3	43
Lucknow ...	3	2	3	2	13	2	23	2	33	2	43	2	53
Masulipatam ...	3	2	3	2	13	2	23	2	33	2	43	2	53
Menghye ...	50	2	50	3	0	3	10	3	20	3	30	3	40
Midnapore ...	20	2	20	2	30	2	40	2	50	3	0	3	10
Mirzapore ...	10	2	10	2	20	2	30	2	40	2	50	3	0
Monghyr ...	25	2	25	2	35	2	45	2	55	3	5	3	15
Mud-Point ...	33	2	33	2	43	2	53	3	3	3	13	3	23
Padeng ...	60	3	0	3	10	3	20	3	30	3	40	3	50

NAMES OF STATIONS.	No. of minutes by which (as compared with time) the Local time is	LOCAL TIMES WHICH SHOULD BE SHOWN BY STATION-CLOCKS AT THE UNDERMENTIONED TELEGRAPH TIMES.											
		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.	
		Hours.	Mins.	Hours.	Mins.	Hours.	Mins.	Hours.	Mins.	Hours.	Mins.	Hours.	Mins.
		2	0	2	10	2	20	2	30	2	40	2	50
STATIONS WHOSE LOCAL TIME IS FAST.													
Patna ...	20	2	20	2	30	2	40	2	50	3	0	3	10
Pegu ...	01	3	1	3	11	3	21	3	31	3	41	3	51
Prome ...	01	3	0	3	10	3	20	3	30	3	40	3	50
Rajmehal ...	30	2	30	2	40	2	50	3	0	3	10	3	20
Rangoon ...	47	2	47	2	57	3	7	3	17	3	27	3	37
Raneegunge ...	24	2	24	2	34	2	44	2	54	3	4	3	14
Rangoon ...	01	3	1	3	11	3	21	3	31	3	41	3	51
Rewah ...	4	2	4	2	14	2	24	2	34	2	44	2	54
Sasaram ...	15	2	15	2	25	2	35	2	45	2	55	3	5
Saugor-Island ...	31	2	31	2	41	2	51	3	1	3	11	3	21
Sherghotty ...	18	2	18	2	28	2	38	2	48	2	58	3	8
Shoayghien ...	03	3	3	3	13	3	23	3	33	3	43	3	53
Thyethoo ...	53	2	53	3	3	3	13	3	23	3	33	3	43
Vizagapatam ...	12	2	12	2	22	2	32	2	42	2	52	3	2
Vizianagaram ...	12	2	12	2	22	2	32	2	42	2	52	3	2
STATIONS WHOSE LOCAL TIME IS SLOW.													
Acherpore ...	10	1	41	1	51	2	1	2	11	2	21	2	31
Agra ...	0	1	51	2	1	2	11	2	21	2	31	2	41
Ahmedabad ...	31	1	20	1	30	1	40	1	50	2	0	2	10
Ahmednagar ...	21	1	30	1	40	1	50	2	0	2	10	2	20
Allypore ...	0	1	51	2	1	2	11	2	21	2	31	2	41
Attock ...	32	1	24	1	36	1	48	1	54	2	4	2	16
Bangalore ...	10	1	50	2	0	2	10	2	20	2	30	2	40
Bareilly ...	3	1	57	2	7	2	17	2	27	2	37	2	47
Baroda ...	24	1	32	1	42	1	52	2	2	2	12	2	22
Bellary ...	11	1	47	1	57	2	7	2	17	2	27	2	37
Belgaum ...	23	1	37	1	47	1	57	2	7	2	17	2	27
Besra ...	11	1	47	1	57	2	7	2	17	2	27	2	37
Bombay ...	31	1	30	1	40	1	50	2	0	2	10	2	20
Borach ...	20	1	31	1	41	1	51	2	1	2	11	2	21
Buddena ...	41	1	11	1	21	1	31	1	41	1	51	2	1
Bulser ...	20	1	31	1	41	1	51	2	1	2	11	2	21
Calicut ...	18	1	42	1	52	2	2	2	12	2	22	2	32
Cannanore ...	10	1	41	1	51	2	1	2	11	2	21	2	31
Caricall ...	2	1	54	2	4	2	14	2	24	2	34	2	44
Chanda ...	4	1	56	2	6	2	16	2	26	2	36	2	46
Chinnor ...	2	1	58	2	8	2	18	2	28	2	38	2	48
Cochin ...	11	1	40	1	50	2	0	2	10	2	20	2	30
Columbo ...	2	1	58	2	8	2	18	2	28	2	38	2	48
Coonoor ...	14	1	46	1	56	2	0	2	10	2	20	2	30
Dapoorie ...	20	1	31	2	41	1	51	2	1	2	11	2	21
Deesa ...	33	1	27	1	37	1	47	1	57	2	7	2	17
Dellal ...	12	1	48	1	58	2	8	2	18	2	28	2	38
Dera-Gazee-Khan ...	37	1	23	1	33	1	43	1	53	2	3	2	13
Dera-Ishmael-Khan ...	38	1	22	1	32	1	42	1	52	2	2	2	12
Dhoolia ...	22	1	38	1	48	1	58	2	8	2	18	2	28
Fattyghur ...	2	1	58	2	8	2	18	2	28	2	38	2	48
Galle ...	1	1	59	2	9	2	19	2	29	2	39	2	49
Goa ...	25	1	35	1	45	1	55	2	5	2	15	2	25
Gudduck ...	2	1	54	2	4	2	14	2	24	2	34	2	44

NAME OF STATIONS.	No. of minutes by which (as compared with Telegraph time) the Local time is	LOCAL TIMES WHICH SHOULD BE SHOWN BY STATION-CLOCKS AT THE UNDERMENTIONED TELEGRAPH TIMES.											
		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.	
		Hours.	Min.	Hours.	Min.	Hours.	Min.	Hours.	Min.	Hours.	Min.	Hours.	Min.
		2	0	2	10	2	20	2	30	2	40	2	50
STATIONS WHOSE LOCAL TIME IS SLOW.	SLOW.												
Gwalior ...	8	1	52	2	2	2	12	2	22	2	32	2	42
Hyderabad (C. I.) ...	7	1	53	2	3	2	13	2	23	2	33	2	43
Hyderabad (S.) ...	47	1	13	1	23	1	33	1	43	1	53	2	3
Indore ...	2	1	58	2	8	2	18	2	28	2	38	2	48
Jacobabad ...	46	1	14	1	24	1	34	1	44	1	54	2	4
Jubbulpore ...	1	1	59	2	9	2	19	2	29	2	39	2	49
Jullunder ...	19	1	41	1	51	2	1	2	11	2	21	2	31
Kamptee ...	4	1	56	2	0	2	16	2	26	2	36	2	46
Kamarcas ...	53	1	7	1	17	1	27	1	37	1	47	1	57
Kolapore ...	24	1	36	1	46	1	56	2	6	2	16	2	26
Kotree ...	47	1	13	1	23	1	33	1	43	1	53	2	3
Kurnool ...	9	1	51	2	1	2	11	2	21	2	31	2	41
Kurrachee ...	53	1	7	1	17	1	27	1	37	1	47	1	57
Kusmore ...	42	1	18	1	28	1	38	1	48	1	58	2	8
Kusowlee ...	13	1	47	1	57	2	7	2	17	2	27	2	37
Lahore ...	24	1	36	1	46	1	56	2	6	2	16	2	26
Malabar-Point ...	30	1	30	1	40	1	50	2	0	2	10	2	20
Malligaum ...	23	1	37	1	47	1	57	2	7	2	17	2	27
Manaar ...	1	1	59	2	9	2	19	2	29	2	39	2	49
Matheran ...	28	1	32	1	42	1	52	2	2	2	12	2	22
Meerut ...	19	1	41	1	51	2	1	2	11	2	21	2	31
Meerara ...	17	1	43	1	53	2	3	2	13	2	23	2	33
Mahableshwar ...	26	1	34	1	44	1	54	2	4	2	14	2	24
Mooltan ...	35	1	25	1	35	1	45	1	55	2	5	2	15
Moradabad ...	6	1	54	2	4	2	14	2	24	2	34	2	44
Mount ...	24	1	36	1	46	1	56	2	6	2	16	2	26
Murree ...	27	1	33	1	43	1	53	2	3	2	13	2	23
Mysore ...	14	1	46	1	56	2	6	2	16	2	26	2	36
Nagpore ...	13	1	47	1	57	2	7	2	17	2	27	2	37
Nasick ...	20	1	34	1	44	1	54	2	4	2	14	2	24
Negapatam ...	1	1	59	2	9	2	19	2	29	2	39	2	49
Nellore ...	1	1	59	2	9	2	19	2	29	2	39	2	49
Nugger-Parker ...	38	1	22	1	32	1	42	1	52	2	2	2	12
Nynee-Tal ...	3	1	57	2	7	2	17	2	27	2	37	2	47
Ongole ...	1	1	59	2	9	2	19	2	29	2	39	2	49
Ootacamund ...	14	1	46	1	56	2	6	2	16	2	26	2	36
Parali ...	12	1	48	1	58	2	8	2	18	2	28	2	38
Paumbon ...	4	1	56	2	6	2	16	2	26	2	36	2	46
Peshawur ...	34	1	28	1	38	1	48	1	58	2	6	2	16
Pondicherry ...	1	1	59	2	9	2	19	2	29	2	39	2	49
Poona ...	24	1	36	1	46	1	56	2	6	2	16	2	26
Puttoorottah ...	4	1	56	2	6	2	16	2	26	2	36	2	46
Rajunpore ...	40	1	20	1	30	1	40	1	50	2	0	2	10
Rawal-Pindoo ...	31	1	29	1	39	1	49	1	59	2	9	2	19
Sattara ...	25	1	35	1	45	1	55	2	5	2	15	2	25
Sawant-Warree ...	25	1	35	1	45	1	55	2	5	2	15	2	25
Souunderabad ...	7	1	53	2	3	2	13	2	23	2	33	2	43
Swerah ...	13	1	47	1	57	2	7	2	17	2	27	2	37
Seonee ...	3	1	57	2	7	2	17	2	27	2	37	2	47
Sepree ...	10	1	50	2	0	2	10	2	20	2	30	2	40
Seroor ...	23	1	37	1	47	1	57	2	7	2	17	2	27
Shajehaspore ...	1	1	59	2	9	2	19	2	29	2	39	2	49

NAMES OF STATIONS.	No. of minutes by which (as compared with Telegraph time) the Local time is	LOCAL TIMES WHICH SHOULD BE SHEWN BY STATION-CLOCKS AT THE UNDERMENTIONED TELEGRAPH TIMES.											
		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.		TELEGRAPH TIMES.	
		Hours.	Minuta.	Hours.	Minuta.	Hours.	Minuta.	Hours.	Minuta.	Hours.	Minuta.	Hours.	Minuta.
		2	0	2	10	2	30	2	30	2	40	2	50
STATIONS WHOSE LOCAL TIME IS SLOW.	SLOW.												
Shikarpore ...	46	1	14	1	24	1	34	1	44	1	54	2	4
Simla ...	12	1	48	1	58	2	8	2	18	2	28	2	38
Sukkur ...	45	1	15	1	25	1	35	1	45	1	55	2	5
Surat ...	29	1	31	1	41	1	51	2	1	2	11	2	21
Tannah ...	29	1	31	1	41	1	51	2	1	2	11	2	21
Tarcoaba ...	48	1	12	1	22	1	32	1	42	1	52	2	2
Tonghoo ...	36	1	24	1	34	1	44	1	54	2	4	2	14
Tuticorin ...	8	1	52	2	2	2	12	2	22	2	32	2	42
Umballa ...	14	1	46	1	56	2	6	2	16	2	26	2	36
Umritsur ...	22	1	38	1	48	1	58	2	8	2	18	2	28
Vellore ...	4	1	56	2	6	2	16	2	26	2	36	2	46
Vinguria ...	27	1	33	1	43	1	53	2	3	2	13	2	23
Warrungal ...	2	1	58	2	8	2	18	2	28	2	38	2	48

GOVERNMENT TELEGRAPH DEPARTMENT.

INSTRUMENT BRANCH, CIRCULAR No. 117.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to the Assistant in Charge ———— Office,—Dated Calcutta, the 14th of September 1861.

A Message to all Stations, dated the 28th February, prohibited the use of Salt in Line Batteries.

Experiments, conducted by Mr. Lane at Agra with a Battery prepared without Salt, led to the expectation that inconveniences might be expected from the well known effect of the current in causing a transfer of liquid from the positive or zinc to the negative or copper side of the cells. A subsequent experiment by Mr. Lane showed that, whether from a difference in quality of the porous cells used, or other cause, the action in question, if it existed, did not exist to a marked or inconvenient extent.

When publishing the Message above referred to, it was not thought desirable to give any caution on this point, because by most Assistants the action and its reason and remedy would be known; and also because that, where unknown, no explanation of reasonable brevity was at all likely to be understood.

It has long been known that the effect of a current of electricity passing through a liquid, whether forming part of a Galvanic element or not, provided the liquid is divided into two portions by a porous partition into each of which a wire from the two

poles of a Battery is led, is to raise the level of the liquid on that side which corresponds with the negative side of the Battery, the action increasing with the strength of the current and with the resistance or bad conductivity of the liquid; but that when the liquids were good conductors, the action in question was imperceptible. Now as by employment of Salt on the zinc or positive side of the Battery the conductivity of the liquid in contact with the zinc plate is increased as compared with the conductivity of plain water in the ratio of perhaps 1 to 50, it was to be expected that the "osmotic" effect referred to, although little perceptible in Batteries prepared with Salt, might become inconvenient in the case of Batteries prepared with plain water, and such indeed would be the case were the liquid on the zinc side to continue throughout its action pure water; but this cannot be, for the effect of action in the Battery is to produce on the zinc side a solution of sulphate of zinc of continually increasing strength, an effect, which if permitted to continue sufficiently long, would stop the action of the Battery altogether by filling up the zinc side with crystals of sulphate of zinc.

It is obvious that the continually increasing production of the zinc Salt must, by continually increasing the conductivity of the liquid on the zinc side, as continually diminish the tendency to osmotic action, and that, to avoid inconvenience from this action it is sufficient, when preparing a fresh Battery to employ, instead of plain water, a mixture of water with some of the zinc solution obtained from the Battery which is under renewal.

The simplest way of effecting this is by passing the entire of the solution from the zinc side of the old Battery through a couple of folds of cloth to remove any dirt or particles of copper or other negative metal, the result of local action, which it may contain, making up any deficiency in the bulk of the liquid by the addition of plain water, and using this in lieu of plain water on the zinc side of the new Battery.

I take this opportunity of explaining why no inconvenience need be apprehended from the disease of Salt.

In each description of Battery Element there is a characteristic Energy usually termed Electro-motive force, which, differing in the different classes of Batteries, is in each class absolutely independent of the size of the Battery plates or the strength or conductivity of the solution employed; for instance, in Grove's Element, or the modification of it called Bunsen's, having strong nitric acid on the negative side, the Electro-motive force of each cell may be represented by 100. In Daniel's Element used for Line and Local purposes on the Indian Lines, this force may be represented by 57, and in Smee's or Woollaston's Element by 25.

Now it is this Electro-motive force alone which produces the electric current, the one being proportional to the other; and as this force is independent of the size of the plates composing the Battery, or of their distance apart, or of the conductivity of the liquids used in the Battery, but dependent solely on the nature and number of the Elements used, it may reasonably be asked why in some Batteries large plates placed close together, or acid solutions are employed? The reply to the question is, that large plates increase the sectional area of the Battery liquids through which the current passes, and, like a similar increase to the size of metal conductors, facilitates the passage of the current.

In like manner, approximating the plates by shortening the course of the current like shortening a metal conducting wire, gives greater freedom for the passage of the current. Again, acids and Salts, by increasing the conductivity of the solution, have the same effect as a change from a worse to a better conductor, as from iron to copper.

Experiments were on the 1st current tried in the Calcutta Office with Batteries prepared with and without Salt. The result was that no differences could be observed between a series of 36* cells *without* Salt, compared with one of 40 cells *with* Salt, and the same result was obtained when the two series were reduced successively to 30, 20, 10, and 5 cells. The experiments were performed on the Line from Calcutta to Kedgerie, a distance of 80 miles, with one Submarine Cable of two miles in length intervening. Signals were readable with all the combinations, excepting with those of 5 cells.

This Circular leaves the use or disuse of Salt on the zinc side of Batteries entirely at the discretion of Assistants, who are reminded that care in keeping up the strength of the Sulphate of Copper solution by a constant supply of large crystals will have far greater influence on the efficiency of their Batteries than any variation in the nature of the solution around the zinc.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 118.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to the Assistant in Charge ———— Office,— Dated Calcutta, the 15th of September 1861.

I FORWARD a Table shewing the resistances to the passage of a current of electricity offered by iron and copper wires of the sizes shewn by the numbers on the Birmingham wire-gauge. No. 1 iron wire has been taken as the unit of resistance, to which the resistances of all other sizes of wire, whether of iron or copper, have been referred. The term *resistance* is intended to imply the inverse of what is usually termed *conductivity*.

The following examples will shew the uses to which this Table may be applied :—

FIRST EXAMPLE.

What length of line composed of No. 8 iron wire will offer the same resistance, and therefore permit of being worked by the same sized Battery as a line of No. 1 iron wire 120 miles long ?

As (8-308, &c., or say) 8-3, the measure of resistance of No. 8 iron wire, is to 1-0, the measure of resistance of No. 1 iron wire, so is 120 miles, the given length of No. 1 wire to 66½ miles, nearly the length of the No. 8 wire sought.

* This number was by mistake used instead of 40, the error was not discovered until the experiments had made some progress.

SECOND EXAMPLE.

I have a line of Telegraph 100 miles long to construct, and desire that it shall not offer greater resistance to the current than a line of similar length constructed of No. 1 iron wire. I have, however, none of the latter, but propose substituting No. 16 copper wire for it—how should I proceed?

I find from the Table that the resistance of No. 16 copper wire is 3·877 times as great as that of an equal length of No. 1 iron wire; consequently by twisting 4 stands of the copper wire together, I have a conductor whose resistance is equal to one-fourth of 3·877 or 0·97 miles nearly, a resistance somewhat under that of No. 1 iron wire.

THIRD EXAMPLE.

I am anxious to ascertain the exact amount of additional resistance caused by a Galvanometer, such as is used in the Calcutta Signal Office, and made in the Calcutta Workshop—the Galvanometer containing 200 yards or 0·11364 miles of No. 34 copper wire.

The resistance of this size of wire is, as shewn by the Table, nearly 334 times that of No. 1 iron wire, consequently the resistance of the wire composing the Galvanometer is equal to 37·9, or nearly 38 miles of No. 1 iron wire, and as on any section of line, say that between Calcutta and Burdwan, a distance of 67 miles, the current has to pass through 2 Galvanometers, viz. 1 each at Burdwan and Calcutta, the resistance due to these Galvanometers alone is equal to that offered by 57 miles of No. 1 iron wire, and therefore nearly equals the resistance of the line itself, which is of No. 1 wire and 67 miles long, a circumstance which shews the great importance of reducing this obstruction to currents as much as possible by throwing the Galvanometers out of the circuit whenever possible, and especially when working long stretches in D.

These considerations also show the importance of employing Galvanometers, which, whether, from having a thicker or a shorter wire, or still more from both causes united, oppose less resistance to the current than the one just described. Such are the Galvanometers designed by Sir William O'Shaughnessy, and described in page 103 of his Manual, in which the wire is one 130th of an inch or ·0077 inches in diameter and 50 yards long. Now, if we leave out of consideration the reduction of resistance gained by the slightly greater diameter of the wire used in this last, then, as its length is only one-twelfth of that previously described, its resistance is equivalent to that of 3·16 miles of No. 1 iron wire, and the resistance of two such Galvanometers to 6·3 miles of No. 1 wire, instead of to 57 miles, as in the case of the Galvanometers in present use.

There are, no doubt, occasions when the difficulty of receiving renders the employment of very sensitive Galvanometers necessary, and it might be in this view convenient to construct Galvanometers with successive coils of wire, any number of which might be joined together end to end by appropriate contact plugs, such number only being used as the occasion might demand.

I take this opportunity of remarking that if the same sized frame is used for Galvanometers prepared from wire of different diameters, then, neglecting the thickness

due to the silk covering of the wire, if the diameters of the wires are as 1, 2, 3, 4, &c., the length which can be wound on the frame so as to fill it; and consequently the sensibility to a current will be as 1, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, &c., and the resistances as 1, $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, &c., showing the very rapid diminution of resistance caused by the employment of thick wire in Galvanometers and the desirability of using such mode of reducing resistance whenever circumstances permit.

FOURTH EXAMPLE.

An Inspector of lines has doubts as to the attention paid by a certain Assistant to the state of his line batteries, believing that an unnecessary number of elements are employed for the distance, which is 100 miles. He has a section of line of 50 miles in length over which an Assistant, known to be careful, is able to work well with 20 elements, and desires to know the number of elements which should suffice for the line of 100 miles in length, both being alike as respects description of Galvanometer, size of line wire, &c. The current has to pass in each case through the line battery, through the instrument connections whose resistances being trifling may be neglected; then through the Galvanometer of the near station; thence along the line wire to the distant Galvanometer and relay; and thence through the earth back to the battery from which it started. Now, assuming the Galvanometers to be those described in Example 3, we have each of their resistances equal to that due to $28\frac{1}{2}$ miles of No. 1 line wire. Again, the coils of the distant Morse relay by Siemens contain in all 440 yards or $\cdot 447$ miles of copper wire, $\cdot 0075$ in diameter, or No. 33 $\frac{1}{2}$ gauge, whose resistance will equal 140.6 miles of line wire. The resistance of the earth is inappreciable. The resistance of the elements themselves as in no way affecting the calculation is omitted.

The comparison lies thus—

<i>In the 100 miles Line.</i>			<i>In the 50 miles Line.</i>		
2 Galvanometers	...	57.0 miles	2 Galvanometers	...	57.0 miles
1 Relay	...	140.6 "	1 Relay	...	140.6 "
100 Miles line wire	...	100.0 "	50 Miles line wire	...	50.0 "
Total resistances			Total resistances		
297.6 miles			247.6 miles		

whence, by simple proportion, we find that the number of elements required for the 100 miles line is very nearly but not quite 24, instead of 40, as might at first sight, from the comparative lengths of the lines, have been expected. It should be remarked that this form of calculation applies to lines in which, whether from good insulation or from dryness of weather, there is little loss of current through the posts. Where losses of current are great, the calculation is more complicated.

The advantage of working in D as far as possible, when attempting direct communication with very distant stations, is so obvious, the risks attendant on the management of so many relays being thereby so greatly reduced, that it is worth while to attempt to remove the obstructions offered by the present Galvanometers, as well as to reduce the number through which the current passes. For the first of these objects it is intended to furnish short wire Galvanometers to all Offices which may be required to

work in D (at present only those on the three direct lines of communication between the Presidency towns), and for the latter object a Rheotrope by means of which either one or both of the Galvanometers can, when working in D, be at pleasure thrown out of the Circuit.

Table of the lengths of Iron wire No. 1 equivalent in electrical resistance to unity of length of each of the undermentioned sizes of iron and copper wire.

N. B.—The resistance of iron has been assumed equal to 5·5 or 5½ times that of copper, in accordance with Dr. Matthiessen's experiments.

No. of the Birmingham wire gauge.	Corresponding diameter in inches.		Resistances of like lengths—that of iron wire being taken as unity.		No. of the Birmingham wire gauge.	Corresponding diameter in inches.		Resistances of like lengths—that of iron wire being taken as unity.		No. of the Birmingham wire gauge.	Corresponding diameter in inches.		Resistances of like lengths—that of iron wire being taken as unity.	
	In Vulgar Fractions.	In Decimals.	Iron wire.	Copper wire.		In Vulgar Fractions.	In Decimals.	Iron wire.	Copper wire.		In Vulgar Fractions.	In Decimals.	Iron wire.	Copper wire.
1	$\frac{1}{32}$	·300	1·000	0·182	13	$\frac{1}{16}$	·063	9·972	1·813	25	$\frac{1}{64}$	·020	225·0	40·91
2	...	·254	1·116	0·203	14	$\frac{1}{12}$	·083	13·06	2·375	26	...	·018	277·8	50·51
3	...	·259	1·842	0·244	15	...	·072	17·36	2·752	27	$\frac{1}{63}$	·016	351·6	63·92
4	$\frac{1}{16}$	·238	1·589	0·289	16	...	·065	21·30	3·877	28	...	·014	459·2	83·40
5	$\frac{1}{8}$	·220	1·860	0·338	17	...	·058	26·75	4·864	29	$\frac{1}{56}$	·013	533·5	96·83
6	...	·203	2·184	0·397	18	$\frac{1}{20}$	·049	37·48	6·815	30	...	·012	625·0	113·6
7	...	·180	2·778	0·505	19	...	·042	51·02	9·276	31	$\frac{1}{35}$	·010	900·0	169·6
8	$\frac{1}{8}$	·165	3·306	0·601	20	...	·035	73·47	13·36	32	...	·009	111·1	203·0
9	...	·148	4·109	0·747	21	$\frac{1}{31}$	·032	87·80	15·96	33	$\frac{1}{31}$	·009	140·6	255·7
10	...	·134	5·012	0·911	22	...	·028	114·8	20·87	34	$\frac{1}{27}$	·007	183·6	334·0
11	$\frac{1}{6}$	·120	6·240	1·136	23	$\frac{1}{20}$	·025	144·0	26·18	35	$\frac{1}{25}$	·005	360·0	654·6
12	...	·109	7·575	1·377	24	...	·022	186·0	33·81	36	$\frac{1}{25}$	·004	562·5	102·2

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 119.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to the Assistant in Charge ———— Office,—Dated Calcutta, the 16th September 1861.

It has come to my knowledge that the fines imposed on Signallers and others, by Assistants in Charge of Offices, are frequently greatly disproportionate both to the nature

of the offence and the salary drawn by the person fined, which in many instances is so reduced by this practice as to lead, and most reasonably, to much discontent in the grades in question.

It is, therefore, now directed that it shall not be in the power of any Officer, below the grade of Superintendent, to reduce the pay of any person in the Department, and that the highest amount which it shall be competent for Deputy Superintendents to inflict shall not exceed 10 per cent. on the *net salary** of any one person in any one month.

It will be the duty of all Inspectors and Assistants in Charge of Offices, &c., to bring immediately to the notice of Superintendents all cases of neglect or insubordination which they consider deserving punishment, and this Officer will in ordinary cases decide the amount of fine to be inflicted within the above limit. But should the case be such that the maximum amount of fine (10 per cent. on the net salary) is not considered adequate to the nature of the offence the Superintendent will submit the matter through the Director of his Division for the Director General's orders.

The further punishments may be, unfavorable notice in the Character Book, loss of Office allowance in whole or part, or loss of steps in the Departmental Seniority List, as may be recommended by the Director of the Division or otherwise ordered by the Director General.

GOVERNMENT TELEGRAPH DEPARTMENT.

AUDIT BRANCH, CIRCULAR No. 120.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to the Assistant in Charge——— Office,—Dated Calcutta, the 17th of September 1861.

A FORM of Cash Collection Return having lately been introduced for exhibiting and reporting to Government the monthly cash collections of the Department, the following rules are laid down for the preparation of these Returns.

2. The Reports of Cash Collections will be sent from Signal Offices to Deputy Superintendents by Telegraph (Form No. 1) at two hours, and by Post in detail (Form No. 2) on the 1st day of each month. They must shew the amount received from Service, Telegraph Service, and Private Messages, as well as from Peon hire, boat hire, postage with registration, and fees† (these last four items being in the *Telegraph* Report reported in one total as *charges*) also the total receipts, and the shares of the total in Telegraph stamps and cash. Should the entire receipts be either cash or stamps exclusively, then the double

* By net salary is meant Pay, Moneys, and Ear allowances, these latter being now under consolidation as Pay.

† A fee of one Rupee is charged to every person requiring information of the movements of ships on the River Hooghly in anticipation of the partial issues of the Telegraph Gazette, and also for every copy of a Message supplied from the Complaint Office to the sender or receiver.

of the total must be given in the Telegraph Report, but under no other circumstances will doublet be given in such reports. These reports will be embodied by Deputy Superintendents in one general report for the Circle, which must be forwarded by Telegraph at two hours on the 2nd of each month (in Form No. 3) and by Post (in Form No. 4) on the day following the receipt of the posted reports of all Offices.

3. On receipt of these Telegraph Reports six copies of the Cash Collection Return (Form No. 5) will be filled up in the Compiler's (late Auditor's) Office, of which two copies will be forwarded to the Officiating Director General; one being for submission to Government by him, or, in his absence from the Presidency, by the next Senior Officer present; the other for record in the Director General's Office; also one copy to each of the three Divisional Superintendents, and one copy for record in the Compiler's Office. The Officiating Director General will communicate to each Deputy Superintendent the gain or loss in the earnings of his Circle for private Messages, as compared with the corresponding month of the year preceding, in the Form (No. 6) annexed.

4. In the Cash Collection Reports the separate totals of cash collections on account of every kind of Message transmitted must be reported, and in no case is any Cash Collection Report to include, *under the same heading*, collections made for two separate accounts; for instance, the cash taken on account of the Red Sea or other private lines, and held by the Government of India at the credit of those lines, must be reported separately from the share belonging to the Indian Government lines. As regards paid Messages sent for, or bearing Messages received at, any Offices of the Ceylon lines, the share belonging to the Indian Government only will be reported by the Ceylon Deputy Superintendent, who will shew the proportion chargeable to Service and Private Messages; and the additional rate charged on Indian Messages for conveyance over any part of the Ceylon lines must be excluded from the cash collections credited to the Government of India in the reports of the Indian Deputy Superintendents, and must be reported under a separate heading. It will be observed that in these reports no coin of lower denomination than the anna is recognized; in cases where smaller sums than the anna have to be reported, the following fractions of the anna, viz. $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, and no other, must be used. The *pro forma* charges at Goa, Pondicherry, and Karical, and on the Hooghly River need not be reported by Telegraph, but should be shewn in the Return sent by Post. The Returns should be sent in at once from the 1st of June last up to date, exhibiting the collections from the 1st of May, the commencement of the present official year.

5. In the case of the Cash Collection Return sent from the Director General's Office to Government, the following rule for checking the accuracy with which the columns of Increase or Decrease and the totals generally have been calculated, will be used:—

Rule.—The difference between the totals of cash collections in any corresponding months of the present and past years is equal to the difference of the totals of increase and decrease, provided the calculations in question have been correctly made.

(FORM No. 1.)

FROM (STATION) _____ To (STATION) _____
 „ ASSISTANT. „ DY. SUPDT.
 WORDS _____ TEL. SER. FREE.

Collections,—Service Rs. — As. — ; Telegraph Rs. — As. — ; Private Rs. —
 As. — ; Charges Rs. — As. — ; Total Rs. — As. — ; Cash Rs. — As. — ;
 Stamps Rs. — As. —.

N. B.—The amount received for bearing Messages must not be shewn *separately* in the Telegraph Report, but will appear under its proper heading in the report sent by Post. Should the entire collections be either in cash or in stamps, then the separate reports of cash or of stamps must be omitted, as they are obviously useless as a check on the accuracy of the total ; but in such case as a check the double must be given. Where part is in cash and part in stamps, the total affords the required check.

Example.

(The collections having been received partly in cash and partly in stamps.)

FROM DELHI _____ To UMBALLA _____
 „ ASSISTANT. „ DY. SUPDT.
 WORDS _____ TEL. SER. FREE.

Collections,—Service Rs. 150, As. 8½ ; Telegraph Rs. 20, As. 4 ; Private Rs. 430,
 As. 12½ ; Charges Rs. 3, As. 0 , Total Rs. 604, As. 8½ ; Cash Rs. 541, As. 4½ ;
 Stamps Rs. 63, As. 4.

N. B.—Supposing the collections were of one denomination, that is, all cash or all stamps, then the above report beginning at the total would, supposing the receipts to have been entirely cash, run as follows :—

Total cash Rupees 604, As. 8½, half Rupees 1,209, As. 1½.

COLLECTIONS in Cash and Stamps of the _____ Office for

186

Nature of Collections.	—186 .		Previous month's report.		Increase.		Decrease.	
	Rs.	As.	Rs.	As.	Rs.	As.	Rs.	As.
Service Paid								
Service Bearing								
Telegraph Service Paid								
Private Paid								
Private Bearing								
Postage and Registration								
Peon								
Boat								
Fees								
Total Increase and Decrease on last month								

N. B.—Of the total collections of this month Rs. — As. — were received in Cash, and Rs. — As. — in Stamps.

(FORM No. 3.)

FROM (STATION) _____
 „ Dy. Supt.

TO (STATION) _____
 „ DIRECTOR GENERAL.

WORDS _____ TEL. SER. FREE.

Collections,—Service Rs. — As. — ; Telegraph Rs. — As. — ; Private Rs. — As. — ; Charges Rs. — As. — ; Total Rs. — As. — ; Cash Rs. — As. — ; Stamps Rs. — As. — .

N. B.—The amount received for bearing Messages must not be shewn *separately* in the Telegraph Report, but will appear under its proper heading in the report sent by Post. Should the entire collection be either in cash or in stamps, then the separate reports of cash or of stamps must be omitted, as they are obviously useless as a check on the accuracy of the total; but in such case as a check the double must be given. Where part is in cash and part in stamps, the total affords the required check.

(FORM No. 4.)

COLLECTIONS of the _____ Circle for _____ 186 .

NAME OF OFFICER.								TOTAL.
Nature of Collections.	Rs. As.	Rs. As.	Rs. As.	Rs. As.	Rs. As.	Rs. As.	Rs. As.	Rs. As.
Service Paid ..								
Service Bearing ...								
Telegraph Service Paid ..								
Private Paid ..								
Private Bearing ..								
Postage and Register ...								
Fees ..								
Cash ..								
Stamps ...								
Total ..								

(FORM No. 6.)

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, No.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to the
Deputy Superintendent _____ Circle,—Dated Calcutta, the _____ of _____ 1861.

I ANNEX extract from Report to the Government of India of the Cash Collections of the Department during the month of _____ last, shewing the increase or decrease on the corresponding month of last year.

Extract from the Officiating Director General's Report to the Government of India of the Cash Collections in the Telegraph Department, (shewing Increase or Decrease on the corresponding month of last year) for the month of _____ 1861.

N. B.—This Return does not include Cash received to credit of any Lines other than those belonging to the Government of India, nor the Cash payments made by persons in the Department for the Messages they may send on its business, nor the *pro forma* charges for such of the Messages of the Marine Department as are sent by the River Lines.

CIRCLE.

MONTH.	Year.	Service.		Private.		Total.	
		Rs.	As.	Rs.	As.	Rs.	As.
	1861						
	1860						
Increase	{ Rs. Per cent.						
Decrease	{ Rs. Per cent.						

REMARKS.—The Total Collections of the Department on Private Messages for the month were Rupees
being _____ per cent. { over } those for the corresponding month of last year.
under }

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 121.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to the Assistant in Charge ————— Office,—Dated Calcutta, the 24th September 1861.

I REQUEST that in view to reduce, as far as possible, the number of undelivered Messages, a Vernacular list of Natives whose addresses have not been found, may be posted on the outside of the Office in the usual place for such notices, in addition to the list posted in English.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 126.

From Lieutenant-Colonel C. DOUGLAS, Officiating Director General of Telegraphs in India, to the Assistant in Charge ————— Office,—Dated Calcutta, the 13th November 1861.

IN continuation of Circular No. 119 of the 16th September last, it is now directed that the arrangements hitherto in force in the Complaint Office for recovering the value of Messages, the cost of which has been refunded to the senders in consequence of such having been lost in transit or so mutilated as to be unintelligible, will be experimentally changed. It has hitherto been the custom when a Message has been lost to recover the full amount from the Assistant in charge, and in cases of gross error to recover half the amount from the Assistant in charge, and the remainder in equal portions from the two Signallers whose names are given in the Message Drafts of the Offices between which the error occurred, or, where the error was of such a nature as not to be easily discovered on perusal by the Assistant in charge, then the total value of the Message was recovered in equal shares from the Signallers concerned. Under this arrangement the amount of fine became regulated, not by the amount of error or neglect, but by the length of the Message and the distance through which it had to be sent, circumstances in no way connected with, and therefore no fair measure of the amount of fault or of the punishment it should receive.

. This system will, therefore, be experimentally changed, and for the future fines for losses of Messages and errors will be regulated as follows :—

In the case of the *loss* of a Message, the Assistant on duty at the time of its receipt in the Office in which it has been lost will be fined its full value, provided that does not exceed 10 Rupees, this sum being the maximum. In the case of *error* the fines will be distributed as follows :—

On the Assistant by whom the copy in which the error appears was signed Rupees 3, on the receiving Signaller Rupees 2, and on the sending Signaller Rupee 1. This

arrangement is based on the consideration that the chief cause of the errors shewn in the copies of messages is attributable to neglect on the part of the Assistants in receiving Offices of the *very important* duty of examining the messages before permitting their onward transmission, and that of the two Signallers concerned in the transmission of a message, the sender is less blameable for errors than the receiver, it being the business of the latter on completing the text of a message to collate it, by counting the number of words and examining the sense, and in the event of obscurity referring his doubts to the Assistant on duty, or in the case of apparent error, calling on the sending Signaller for repetition of the doubtful portion.

The above scale of fines is the maximum to be at any time inflicted by the Complaint Branch of this Office; the minimum fines will be half these amounts, and such amounts of fines will be inflicted within these limits as may appear to suffice for the ends of discipline.

In explanation of the 3rd paragraph, it seems desirable to mention that it is in contemplation to appoint a Deputy to every Assistant in charge of an Office, who will act for the Assistant in every instance of his temporary absence. This arrangement will admit of either the Assistant or his Deputy being constantly in the Signal-room. A small staff salary will be attached to the appointment, which will be a stepping stone to the higher Office, and selections for it will be made from among the most steady and trustworthy of the Signallers. Meanwhile, in all Offices where the appointments of Deputies to the Assistants in charge have not yet been made, the fines will fall upon the latter.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 130.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to the Assistant in Charge ————— Office,—Dated Calcutta, the 24th December 1861.

FROM the numerous errors in the names of persons and places that are constantly occurring, it is believed that the rule laid down in the following Circular issued by Sir W. B. O'Shaughnessy in 1859 has fallen into disuse. The Circular is therefore republished, and Assistants are requested to be most careful that the instructions therein given are strictly followed in all Messages, whether such have been paid for at repetition price or not.

The order must also now be considered as applicable to the case of *every* word in a Message over the correct receipt of which the context offers no check, such for instance as *Vernacular* words or unusual commercial or technical terms as "*Bottomry*," "*Lay days*," &c., &c., and to all *numbers* and *dates*.

OFFICE ORDER, No. 588.

WITH reference to the numerous and discreditable mistakes which still take place in nearly all the Offices in reporting the *names* of *persons* and *places*, it is hereby directed that in future every *name* in the *address* and *body* of a Message shall be repeated back by the receiving Signaller before the Message is passed on or sent out to the Addressee or issued as Public News.

HEAD OFFICE; }
The 1st July 1859. }

(Signed) W. B. O'SHAUGHNESSY,
Supdt. of Govt. Tels. in India.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 137.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to the Assistant in Charge ————— Office,—Dated Calcutta, the 18th February 1862.

It appears that in certain Telegraph Offices Signallers have been in the habit of receiving fees for writing out in English the messages of Native senders. The practice is most objectionable, and Assistants in charge are held personally responsible that no person attached to their Offices so employs himself. Senders of messages must have their messages written by other agency than that of the Signallers or others attached to the Department.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 140.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to —————,
Dated Calcutta, the 12th March 1862.

WITH reference to Circulars Nos. 92 and 93 of 1861, it has been ascertained that it is the practice in some Offices to make a quadruple charge for a Message received for transmission after 18 h. on Sundays, viz., double for the night charge, and again double the night charge for the Sunday charge. For instance, the cost of a Message of 16 words for 400 miles if sent on ordinary days between 6 and 18 hours is 1 Rupee; such a

Message was lately tendered for transmission on a Sunday between 18 and 20 h. to a Station within the 400 miles limit, and on this the following charge was made :—

Message of 16 words	...	...	Rupee	1	0	0
Double for night transmission	...	...	„	1	0	0
			Rupees	2	0	0
Double for Sunday transmission	...	...	„	2	0	0
			Total Rupees	4	0	0

I am at a loss to understand how the Circular above referred to could have been considered to bear an interpretation admitting of such an unreasonable charge. I request, therefore, it may now be understood that under *no circumstances* can more than double the ordinary price of a Message be charged for its transmission except by the addition of the usual half rate for repetition, should such be desired by the sender.

GOVERNMENT TELEGRAPH DEPARTMENT.

INSTRUMENT BRANCH, CIRCULAR No. 143.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to the Assistant in Charge ————— Office,—Dated Calcutta, the 28th March 1862.

It will be known to all persons in the habit of using Messrs. Siemens and Halske's construction of the Morse Instrument that the relay is not always worked by one and the same Battery current ; but that the actuating Battery differs, depending on whether the working is in S or in T.* Much inconvenience results from this, as each change from S to T work, or *vice versa*, entails a corresponding change in the relay adjustment of the Station with which it is corresponding.

The difficulty may be got over by using the lever of the sending apparatus instead of the manipulating key for correspondence in S when the instruments are working in T ;

* By T working is meant that arrangement of the instrument by which a message is passed on automatically from station to station, and which has hitherto been usually referred to in India by the words "working in W." The letter W is the initial of the word "weitertragung" (in English "carrying forward") used by the German makers generally for indicating this class of work. In countries where the French language is spoken the equivalent term "Translation" is used for indicating this class of work, and as its employment has extended to Germany and become almost universal, its initial letter T will in future be made use of in these Circulars when referring to this class of work.

but the expedient is inconvenient, unsuited for rapid work, and cannot be made use of when simultaneously working with both the right and left hand Stations.

It need scarcely be observed that the evil mentioned would not exist, were the Stations right and left alike distant from the intermediate one, and the wire connecting them therewith as well as the number of its supports and the nature of the insulation in each case alike, for then Batteries of like strength could be used, whose effect on the distant relays would be alike, nor would it signify were a single Battery employed for *both* the instruments in an Office as could be done were the resistance of the line on both sides equal and *considerably* greater than that in the Battery which would always be the case with good insulation or in dry weather.

In the *Morso* Instrument, constructed by Messrs. Digney Freres of Paris, the difficulty is avoided by an improved arrangement of the wires connecting conjugate instruments by which the Battery of the right hand instrument always works the relay of the right hand station, whether the work is in S or in T.

It is most desirable that equivalent arrangements should be made for effecting a like object in all the other instruments in use in the Department, and especially in those of Siemens and Halske's construction.

For this object each of the latter class of instrument must be provided with two additional studs to be marked 3 and 3, and to be arranged as shewn in the accompanying scheme.

C Z C Z E L 3 3 2 2 1 1

which requires six T connections instead of five as now.

This change can only be properly carried out, however, in departmental workshops and as opportunities occur; but as a temporary arrangement the same object may be attained by removing in each instrument the wire which connects the block marked C (the 3rd from the left in the preceding scheme) with the lower end of the pillar on which the lever in its downward motion strikes, and connecting this latter point of one instrument by means of a copper wire with the block marked C (the 3rd from the left) on the other instrument and *vice versa*.

A sketch accompanies shewing the manner in which the above change has been carried out in certain instruments of Messrs. Siemens and Halske's make which have at the same time been re-arranged with a view to reduce their bulk. In doing this it has been found necessary to separate the terminals into two sets, those for T or translation working being in the front, and those connected with the Line, Earth, and Batteries, being placed on the left of the instrument.

GOVERNMENT TELEGRAPH DEPARTMENT.

* GENERAL BRANCH, CIRCULAR No. 143½.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to the Directors of Divisions and Superintendents of Circles,—Dated Calcutta, the 2nd April 1862.

WHENEVER a newspaper or other periodical publication containing unfavorable allusions to the action of the Department or of any of its Officers is forwarded under existing instructions for the information of the Director General, the usual call for explanation should always be anticipated, and the person forwarding the newspaper should, by the same day's Post, forward a letter giving the fullest explanation in his power of the circumstances which may have formed the subject of the unfavorable remarks.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 144.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to —————
—————, —Dated Calcutta, the 14th April 1862.

An exception will be made to Clause XX* of the Rules of the Department given

* The name of the Sender must be written on the face of every Message. in the margin, in cases where the signature has been omitted, and it has been afterwards found impossible to make good the omission.

Messages received from passing ships are very likely to be sent without signature, chiefly from ignorance of the Rules of the Department by passengers and others who may probably be arriving in India for the first time. In all such cases the transmission of the Message must not be withheld, but it must bear a foot note as follows:—"Received unsigned." This foot note must be entered in the fair copy of the Message sent out for delivery as a caution to the receiver, and the two additional words must be charged to the receiver of the Message.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 145.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to —————
—————, —Dated Calcutta, the 17th April 1862.

Two messages of the same tenor but addressed to different parties were recently received for transmission at the ————Office. After the first message had been

signalled, the second was sent on, but instead of transmitting the words in the body of the message, *in extenso*, the signaller gave the word "Ditto" only.

The destinations of the two messages were in opposite directions, and this improper contraction of the second resulted in its loss, but even had it been delivered it would of course have been useless.

It is therefore now directed, that the practice of abbreviating messages in the manner above shewn must not be continued, unless such are directed to be sent as *Circular* messages, for which case special arrangements are provided.

The practice of abbreviating *words* must also be discontinued. *All words must invariably be signalled in full.*

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 117.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to _____
 _____, —Dated Calcutta, the 22nd April 1862.

COMPLAINTS from senders of messages have of late been frequent regarding discourteous behaviour on the part of Assistants in charge of Offices. I have reason to believe that the cases represented to me have not been over-stated, and that a feeling of indifference to the interests of the public is not limited to Assistants in charge, but extends, in some instances, to the higher Officers of the Department.

The matter has attracted the attention of Government, and in a letter from the Home Office I have been directed to carefully watch the conduct of *every Officer in the Department* in his dealings with the public.

The Government further remark as follows :—

" It is in short the bounden duty of every Officer connected with Departments like the Post Office and the Telegraph not only to use their best endeavours to serve the public efficiently and accurately, but also to *take every pains to satisfy the public* that such really is their object and their desire. * * * * *

" These considerations cannot be too strongly impressed upon all Officers, of whatever rank, employed in the Telegraph Department."

Assistants should be aware that the utmost civility and courtesy is required from the person in charge of a Signal Office, and that failing in this essential, however valuable

an Officer may be in other points, he is not fit for Office charge. *All grades* may rest assured that any apathy or indifference to the interests of the public that may be brought to notice will most materially prejudice the advancement in the Department of the person concerned.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 148.

From Lieutenant-Colonel C. DOUGLAS, Director General of Telegraphs in India, to —————
—————, —Dated Calcutta, the 23rd of April 1862.

IN cases where it may become necessary to return to the sender a message which has been tendered for transmission, in consequence of illegibility or other causes, a letter in the form annexed stating the reason for the return will invariably accompany such message.

A book containing 100 Forms of the above letter will be issued to each Signal Office of the Department. When indenting for future copies of this form they will be called "Returning Letters."

It is in many Signal Offices the custom to send written communications on the business of the Department *open* and the practice is not limited to such communications but has been extended to Telegrams when under return to the senders for the causes already given. The practice is a breach of Clause XI. of the Telegraph Act, and must not be continued, and no written communication, however trifling in character, is ever to leave a Signal Office other than so enclosed as to secure its privacy.

This rule does not apply to such communications by Post on Departmental business, as it has hitherto been the custom to send without covers or in covers open at the end.

[*Telegraph.*]

[~~xxx~~]

(FORM)

GOVERNMENT TELEGRAPH DEPARTMENT.

No. From the Assistant in Charge-

-Office.

To -

. the . . . -of . . . -186

I RETURN the Telegram enclosed for the reasons particularized below by No.

I have, &c.,

—— In Charge.

1. Your true signature must be given at the foot of the message.
2. Your address should be given at the foot of the message.
3. The address of the person for whom the message is intended should be more precisely given.
4. There is no Telegraph Office at . . . nor is its position known.
Please state this in view to the nearest Telegraph Office being ascertained.
5. Interruption having been reported between . . . and . . . on the line over which your message should be sent, it is returned. It will be transmitted should you again submit it, and will be passed over the interrupted section by Post should Telegraph communication meanwhile not have been restored.
6. Your message being to a public Officer on your private business, and seeming to require a reply by Telegraph, payment for such reply should be deposited and the fact mentioned as the concluding words of your message, thus:—"Reply —— words deposited." The reply will doubtless otherwise be sent by Post.
7. Numbers must always be written in full as spoken, thus:—1862 should be written eighteen hundred and sixty two.
8. As your message contains numbers, its correct transmission cannot be expected unless the doubles are given thus:—Rupees three hundred and fifty-one; half seven hundred and two.
9. The doubles of the figures in your message require correction.

10. As the Offices of the Department are closed on Sundays, Christmas Day, New Year's Day, the Queen's Birth-day and Good Friday, between the hours of 8 and 16 (or 4 P. M.) your { service } message cannot be received unless certified by { yourself } Civil Officer of the station } and admitted by the Chief Officer of this Department on the spot to be of such urgency that delay in its transmission till 16 hours would injuriously affect the interests { of the State } of the person concerned.

11. The night charge, which is double the day charge, is levied on messages tendered between 16 hours of any day, and 6 hours of the succeeding day. The double or night charge is also made on messages tendered between 6 h. and 8 h. and 16 h. and 18 h. on Sundays, and on the public holidays mentioned under No. 10.

12. The cash sent with your message is insufficient for its payment; the charge under Rule 2, 5, 7, 11, 12, 15, 17 being Rupees — As. —.

13. If you desire your message to be repeated, the additional charge is 50 per cent. on the day charge for an unreported message.

16. Should your message be intended to catch the out-going Mail, you are requested to prefix the words "Mail Message" to insure its transmission under the "Clear the Line" Signal.

17. All messages must be in the English language.

18. No private message or messages exceeding 200 words in all can be sent at one time by the same person or persons.

19. The number of messages on hand being already as great as can be transmitted during the day, your message is refused.

20. Your message being considered objectionable cannot be transmitted without the counter-signature of the Chief European Civil Officer of the station, or in his absence that of the Chief Military Officer.

21. It is not stated whether you desire the message to be transmitted as a *private* message or on the *Public Service*.

GOVERNMENT TELEGRAPH DEPARTMENT.

GENERAL BRANCH, CIRCULAR No. 1, NEW SERIES.

Calcutta, 8th May 1869.

THE following alterations in the revised Rules of this Department, dated the 21st December 1859, have received the sanction of Government :—

Sections previous to alteration.

XI. Dates are optional, but if given are charged for word by word.

XXI. When a message is delivered in an unintelligible state, a refund of the cost will be made to the sender if application be made within two months from the date of despatch, provided the message has been paid for at repetition price.

Sections as now altered.

XI. The day, hour and minute of receipt of a message into a Telegraph Office for transmission is in every instance added by the Department, following immediately the text of the message, and is telegraphed free of charge. Senders may date their messages if they think fit, but the sender's date will be charged for, and will, in view to avoid confusion, if given at the end, be transferred to the beginning of the text of the message.

XXI. When a message is delivered in an unintelligible state, a refund of the cost of the portion rendered unintelligible will be made to the sender, if application be made within three months ~~of~~ the date of despatch, provided the message has not been transmitted beyond the limits of India, its dependencies, or Ceylon ; and within six months, in the case of messages for countries beyond India, as Egypt or Europe. Such refunds will be made irrespective of whether the message has been paid for at repetition price or not but no refund will be given for any error in an unrepeatd message, arising from wrong figures being given, unless the precaution advised in No. XVI. of these Rules shall have been adopted. Refunds on account of messages which have not reached their destination will be made subject to the above limits as respects time.

(Signed) C. DOUGLAS, *Lieut.-Col.,*
Dir. Genl. of Telegraphs in India.

APPENDIX W.

No. 348, dated 28th April 1862.—From the 1st proximo the designations of the "Audit Branch" and "Complaint Office" will be changed into those of "Account Branch" and "Complaint Branch."

No. 349, dated 30th April.—The following Appointments were sanctioned during the month :—

NAME.	To what Situation.	Where.	Rate of Pay. Rupees.	From what date.	Subject to what confirmation or condition.
F. J. Wray	1st Inspector	Punjab	250	1st April 1862	
T. L. Hill	2nd Ditto	Madras	200	Ditto	
J. H. Kenrick	Ditto	Ditto	200	Ditto	
W. Vincent	Ditto	Central India	200	Ditto	
G. Smith	Probationer	Barrackpore School	20	26th Feb. 1862	
A. McMahon	Ditto	Ditto	20	Ditto	
D. Dwyer	Ditto	Ditto	20	15th March 1862	
L. Arratoon	Ditto	Ditto	20	27th Ditto	
Hippo Don Ghose	Ditto	Ditto	10	27th Ditto	
Frosceno Coemar Chakrabarty	Ditto	Ditto	10	Ditto	
J. H. Radcliffe	Ditto	Ditto	20	26th Ditto	Usual bond.
H. Toogood	Ditto	Ditto	20	26th Ditto	
H. Stevens	Ditto	Ditto	20	15th Ditto	
Thomas Malone	Ditto	Patyghur	20	Ditto	
Comin	N. Artificer	Pegu	20	1st Ditto	
Kurroon Khan	Ditto	Cawnpore	20	17th Ditto	
John Byrne	Probationer	Barrackpore School	20	5th April 1862	
Anthony Roderick	Ditto	Ditto	20	Ditto	
E. Breriffe	4th Inspector	Madras	100	1st March 1862	
J. T. Jordan	Head Clerk, Director's Office	Ditto	60	1st April 1862	
A. Emma Kristne Moodhar	Corr. Clerk	Ditto	50	Ditto	Under the revised scheme of Establishment.
T. Krishnaswamy	Asst. Clerk	Ditto	30	Ditto	
Bussoruddy	N. Artificer	Dacca	16	Ditto	
Oofuallu	Ditto	Ditto	35	Ditto	
Muffuddoon	Ditto	Ditto	30	Ditto	
Mohamed Nubbes	Ditto	Ditto	25	Ditto	Under the revised scale of Establishment sanctioned by Government, one to each Office in the Dacca Circle.
Quash	Ditto	Ditto	20	Ditto	
Jaita Bani	Ditto	Ditto	25	Ditto	
Hamda Yecoo	Ditto	Ditto	20	Ditto	
Sudder Ali	Ditto	Ditto	20	Ditto	
T. Veera Sawmy Pillay	Asst. Superintendent's Office	Madras	100	Ditto	
T. Ragho N. Ju Pillay	Asst. Ditto	Ditto	40	Ditto	
R. Cunda Sawmy Naidoo	Btl. Examiner	Ditto	30	Ditto	Madras Superintendent's Office Establishment sanctioned by Government in the revised scheme.
M. Mangally Pillay	Copying Clerk	Ditto	20	Ditto	
R. T. Newland	Corr. Clerk	Ditto	50	Ditto	
R. Rethnavalou Pillay	Clerk	Ditto	30	Ditto	
C. Vardarajulu Moodhar	Ditto	Ditto	25	Ditto	
John Platt	Probationer	Jalundar	20	26th Feb. 1862	Usual bond.
Richard Gildes	Ditto	Umballa	20	5th April	Ditto.
Francis Davis	Ditto	Barrackpore School	20	10th Ditto	Ditto.
Banes Madhub Moodhar	Ditto	Ditto	10	7th Ditto	Ditto.
Toobee	N. Artificer	Bangal, Alichabad Office	30	27th March	Salary includes horse allowance
Merrie	Ditto	Punjab, Lahore Office	30	1st May 1862	Ditto.
G. B. Adia	Probationer	Barrackpore School	20	7th March	
E. J. Dickson	Ditto	Ditto	20	31st Ditto	
F. A. Williams	Ditto	Ditto	20	Ditto	
Kader Ramh Neogee	Ditto	Ditto	10	Ditto	
J. M. A. Guinejar	Ditto	Ditto	20	1st April 1862	
Edmond Faguet	Ditto	Ditto	20	Ditto	Usual bond.
Gopal Chander Turfidar	Ditto	Ditto	10	Ditto	
Saty Bhovra Laha	Ditto	Ditto	10	Ditto	
Shama Chora Doss	Ditto	Ditto	10	Ditto	
Raj Chander Roy	Ditto	Ditto	10	Ditto	
G. Rebello	Clerk, Superintendent's Office	Bombay	50	Ditto	Pier Shamrow Marojee dismissed.
G. Fernandes	Probationer	Belgaum Office	20	1st May 1862	Usual bond.

NAMES.	To what Situation.	Where.	Rate of Pay.	From what date.	Subject to what confirmation or condition.
			Rspees.		
Khemma ...	N. Artificer ...	Indore ...	50	1st May 1863 ...	Promoted from Rspees 40 on Mr. Man's recommendation. Pay includes horse allowance.
Rao Khan ...	Ditto ...	D. G. Khan ...	80	6th April 1863 ...	Pay includes horse allowance.
D. B. Jolly ...	Probationer ...	Barrackpore School ...	20	24th Ditto ...	Usual bond.
Joy Gopal Dey ...	Head Clerk, Office of Director of Eastern Division	Calcutta ...	100	30th April 1863 ...	Vice Tara Mohun Mookerjee, reduced to 2nd Clerk.
Tara Mohun Mookerjee	Corr. Clerk ...	Ditto ...	80	30th Ditto ...	Vice Madhub Chunder Gangooly.
Madhub Chunder Gangooly	Copp. Clerk ...	Ditto ...	30	Ditto	Vice Mutty Lal Paul dismissed.
Meah Jan ...	N. Artificer ...	Pegu ...	30	14th Ditto ...	Vice David dismissed.
R. Francis ...	Probationer ...	Hawul Pindoe ...	20	11th Ditto ...	Usual bond.
G. King ...	Ditto ...	Ditto ...	20	Ditto	Ditto.
F. Ashton ...	Ditto ...	Barrackpore School ...	20	21st Ditto	Ditto.
W. Kelly ...	Asst. Superintendent's Office ...	Soude, Kurrachee ...	100	6th August 1861	Temporarily.
D. Grant ...	Asst. Ditto ...	Ditto ...	30	24th March 1862	
Taitya Dhowadive ...	Corr. Clerk ...	Ditto ...	40	Ditto	
R. Canda Sawmy ...	Asst. Superintendent's Office ...	Madras ...	50	12th Sept 1861 ...	Sanctioned up to the 31st of March 1862, the new scale of Establishment coming into operation from the 1st of April 1862.
R. Vurdia ...	Store-keeper ...	Ditto ...	35	Ditto ...	
John Cronin ...	Probationer ...	Calcutta ...	20	24th April 1863	
John Ainger ...	Ditto ...	Hawul Pindoe ...	20	16th Ditto ...	Ditto.
R. G. Boyd ...	Ditto ...	Barrackpore School ...	20	23rd Ditto ...	Ditto.
John Carey ...	Ditto ...	Ditto ...	20	24th Ditto ...	Ditto.
Patrick McNamara ...	Ditto ...	Ditto ...	20	Ditto ...	Pay includes horse allowance.
John Cahill ...	Ditto ...	Ditto ...	20	Ditto ...	
T. Pinchanada Pillay	N. Artificer ...	Madras ...	30	15th Ditto ...	
Chandra Sacarn Row ...	Ditto ...	Vellore ...	30	Ditto ...	
A. Appajee Swamy ...	Ditto ...	Bangalore ...	30	Ditto ...	
C. Ramantha Row ...	Ditto ...	Bellary ...	30	Ditto ...	
G. Ponrungum ...	Ditto ...	Mysore ...	30	Ditto ...	
C. Annantha Charry ...	Ditto ...	Gottacamund ...	30	Ditto ...	
F. Chengleroya Chetty	Ditto ...	Mercara ...	30	Ditto ...	
M. Neguah ...	Ditto ...	Cannanore ...	30	Ditto ...	
J. Roopasing ...	Ditto ...	Calcutt ...	30	Ditto ...	
R. Narain Swamy ...	Ditto ...	Cochin ...	30	Ditto ...	
M. C. Ritharajooloo ...	Ditto ...	St Thomas Mount ...	30	Ditto ...	
J. Sasa Sundra Rajoo ...	Ditto ...	Pondicherry ...	30	Ditto ...	
C. Sreenavasa Charry ...	Ditto ...	Karikal ...	30	Ditto ...	
N. Ramasawmy Moodily	Ditto ...	Negapatam ...	30	Ditto ...	

No. 350, dated 30th April.—The following Alterations in Salaries were directed during the month:—

NAMES.	In what School or Office.	From.	To.	From what date.	REASONS FOR ALTERATIONS.
		Rs.	Rs.		
W. K. D. Bignell	Bengal Circle.	200	250	1st April 1862	Promotions under the revised scheme of Establishment.
C. H. Malpas	Ditto	150	250	Ditto	
H. Hammond	Ditto	200	250	Ditto	
M. B. Truman	Dacca	225	250	Ditto	
R. D. G. Naylor	Punjab	200	250	Ditto	
W. McGregor	Ditto	150	250	Ditto	
S. Porter	Pegu	150	200	Ditto	
T. C. Hill	Ditto	150	200	Ditto	
W. M. Eckford	Dacca	150	200	Ditto	
R. L. F. McMullin	Ditto	100	200	Ditto	
A. W. Swaine	Bengal	150	200	Ditto	
R. F. Dallas	Punjab	150	200	Ditto	
L. V. Fraser	Ditto	125	200	Ditto	
W. H. Rees	Ditto	100	200	Ditto	
G. G. Charles	Ditto	100	150	Ditto	
E. C. Yeatman	Ditto	100	150	Ditto	
C. F. Rowband	Ditto	100	150	Ditto	
C. R. G. Gibson	Ditto	100	150	Ditto	
J. G. Cairns	Ditto	100	150	Ditto	
J. W. Grinnol	Behgal	125	150	Ditto	
E. T. P. Biddulph	Ditto	100	150	Ditto	
R. F. Parsons	Central India	150	250	Ditto	Receiving 12 words per minute and being fit for Office duty.
F. F. Babington	Ditto	150	250	Ditto	
W. Evans	East Coast	175	200	Ditto	
G. Richardson	Ditto	150	200	Ditto	
T. Blissett	Madras	150	200	Ditto	
G. A. Goslin	East Coast	100	200	Ditto	
J. E. Seppings	S. E. Coast	100	200	Ditto	
C. Duffin	Ditto	100	200	Ditto	
E. Faulkner	Madras	100	150	Ditto	
W. B. O'Brien	Indore	100	200	Ditto	
C. H. Johnstone	Scinde	100	250	Ditto	Receiving 6 words per minute.
W. J. C. Westaway	Ditto	100	150	Ditto	
R. Madras	Meerut School	30	40	15th Aug. 1861	
J. Percy	Ditto	30	40	15th June	
G. Daly	Ditto	30	40	Ditto	
C. Brawley	Ditto	30	35	15th Aug. 1861	
W. Stuffle	Ditto	30	35	Ditto	
P. Roberts	Ditto	30	35	15th Mar. 1861	
G. Smith	Barrackpore School	20	25	1st April 1862	
A. McMahon	Ditto	20	25	15th Ditto	Receiving 12 words per minute and being fit for Office duty.
J. H. Radcliffe	Ditto	20	25	Ditto	
G. Smith	Ditto	25	30	Ditto	
R. D. Mitchell	Belgaum Office	20	25	1st Ditto	
Ditto	Ditto	25	30	1st May 1862	
D. Whelan	Ditto	20	25	Ditto	
E. High	Ditto	20	25	Ditto	
G. Fernandez	Ditto	20	25	Ditto	
F. A. Williams	Bkpore School	20	25	2nd Ditto	
E. J. Dickson	Ditto	20	25	Ditto	Ditto.
D. Dozey	Ditto	20	25	Ditto	

No. 551, dated 30th April.—The following Transfers were sanctioned during the month :—

NAME.	Rank.	FROM.		TO.		From what date.	REMARKS.
		Circle.	Station.	Circle.	Station.		
P. C. O'Reilly	Signaller	Madras	Pondicherry	S. E. Coast.	Pamban...	10th February 1863	To the charge of the Office
I. McLean	Ditto	Bengal	Benares	C. India	Mirzapore	12th Ditto	
I. Thammiah	Ditto	{ Madras } School	.....	Madras	.....	1st March 1863	
F. Blissett	2nd Inspector	Madras	.....	E. Coast.	{ Vizagapatnam }	11th April 1863	
J. G. Charles	3rd Ditto	Punjab	Delhi	Bengal	Burhee	17th Ditto	Ditto.
L. Wolf	Asst. in Charge	Bengal	Burdwan	E. Division	{ Barrackpore School }	4th Ditto	{ Vice Mr. B. Finch. He will also hold charge of the Barrackpore Signal Office.
G. Smith	Probationer	{ Barrackpore School }	.....	Bengal	Calcutta	15th Ditto	
A. E. Carey	Signaller	Bombay	Bombay	Indore	Nassick	10th Ditto	
J. Fullam	Ditto	Ditto	Ditto	Ditto	Ditto	Ditto	
J. Hill	Ditto	Ditto	Ditto	Sinde	Kurrachee	Ditto	
C. O. D'Almeida	Ditto	Ditto	Ditto	Ditto	Ditto	Ditto	

No. 352, dated 30th April.—The following changes were sanctioned during the month :—

NAME.	Rank.	Circle.	Where from.	Where to.	From what date.	REMARKS.
J. W. Canton	...	C. India	Mirzapore	Rewah	9th February ..	To the charge of the Office.
J. Draper	...	Ditto	Rewah	Mirzapore	11th Ditto ..	Removed from charge of the Office for mismanagement.
S. Pettigrew	...	Madras	2nd Dvn Line	3rd Dvn. Line	8th Ditto ..	These changes were necessary on the abolition of the Bangalore Work-shop.
R. Faulkner	3rd Inspector	Ditto	Bangalore Work-shop	2nd Ditto	Ditto ..	
M. Brooke	...	Ditto	Bangalore	Seera	13th Ditto	His travelling expenses will not be borne by Government, Signaller Brooke being sent to re-plate another signaller who had obtained leave.
Venateschellum	...	Ditto	Seera	Bellary	17th March	To the charge of the Office.
J. Wiskin	...	Ditto	Training School	Pondicherry	5th February ..	
W. B. Castello	3rd Inspector	Ditto	Madras	3rd Dvn. Line	4th Ditto	
C. Jolly	Signaller	Ditto	Seera	Bangalore	10th March ..	
G. Tate	...	Ditto	Ditto	Ditto	16th Ditto ..	
M. Brooke	...	Ditto	Ditto	Bellary	10th Ditto ..	
A. Mollan	...	Ditto	Ditto	Bangalore	Ditto	
A. Judge	...	Bengal	Alahabad	Besraes	1st March ..	
W. Spratt	...	Ditto	Besraes	Allahabad	Ditto	
T. Freeman	...	Ditto	Calcutta	Burdwan	20th Ditto	
E. Fleming	...	Ditto	Burdwan	Calcutta	15th Ditto ..	
N. B. Daly	...	Ditto	Dahree	Besraes	11th Ditto ..	
W. Judge	...	Ditto	Rudergunge	Calcutta	30th Ditto ..	
G. Soobra Meyer	Signaller	Madras	Bellary	Vellore	1st April	For the benefit of his health and at his own expense.
J. Ashworth	...	Ditto	Bangalore	Madras	15th September	At their own expense.
A. Mergler	...	Ditto	Madras	Madras	11th Ditto	
T. Hines	2nd Inspector	Ditto	Bangalore	2nd Dvn. Line	27th Ditto ..	For W. W. Hiddolph on sick leave.
J. W. Jordan	...	Ditto	1st Dvn. Line	2nd Dvn. Line	1st October ..	For Wayne, deceased.
J. Oren	Artificer	Ditto	2nd Dvn. Vellore	W. C. Line	30th November	For Paul, deceased.
W. H. Taylor	Signaller	C. India	Kurnool	Hydrabad	1st April	At his own expense. This cancels the unexpired portion of his sick leave.
J. E. H. Lynch	...	Bengal	Kelgeres	Calcutta	9th Ditto ..	
R. D. Ghose	...	Ditto	Mad Point	Kochrabatty	16th Ditto	

No. 553, dated 30th April.—The following Leaves were sanctioned during the month:—

Names.	Rank.	Circle.	From what date.	For what period.	Nature and Condition of Leave.
A. Lynch	Signaller	Bengal	9th March 1862	1 week	On Private Affairs, full pay.
Womas Churn Chatterjee	Asst in charge	Ditto	12th Ditto	6 days	Ditto.
Ram Doyal Ghose	Signaller	Ditto	18th Ditto	1 month	Privilege.
F. Boeckes	Asst. in charge	Ditto	22nd Ditto	1 Ditto	Ditto.
W. Jaden	Signaller	Ditto	25th Ditto	4 days	Ditto.
H. Dodd	Ditto	Ditto	1st Ditto	4 months	Sick, half pay.
Frederic Cosmar Baccorjee	Ditto	Ditto	31st Ditto	1 Ditto	Ditto.
J. Widen	Ditto	Madras	17th Ditto	12 days	On urgent Private Affairs.
C. T. Jolly	Ditto	Ditto	13th February 1862	6 weeks	Sick, half pay.
C. Shunmooogum	Clerk	Ditto	4th March 1862	2 months	On Private Affairs, full pay.
W. H. Taylor	Signaller	C. India	.....	3 Ditto	Sick, half pay.
J. S. Frodo	Ditto	Ditto	.....	3 Ditto	Sick, half pay.
C. Rajenthram	Ditto	East Coast	11th March 1862	1 Ditto	Privilege, full pay.
W. W. Biddulph	1st Inspector	Madras	24th Ditto	6 Ditto	Sick. Extension of six months' previous leave by the Secretary of State for India, half pay.
C. Duffin	2nd ditto	S. E. Coast	15th January 1862	4 Ditto	Sick leave to Octosimum, half pay.
A. Mergler	Signaller	Madras	1st April 1862	1 Ditto	Privilege, full pay.
J. Lewis	Ditto	Ditto	12th Ditto	1 Ditto	Privilege, full pay.
W. Shave	Ditto	Bengal	9th March 1862	4 days	On Medical Certificate, half pay.
E. Okey	Ditto	Ditto	6th Ditto	25 Ditto	On Medical Certificate, half pay.

No. 354, dated 30th April.—The following Casualties occurred or were reported during the month :—

NAME.	Rank.	Station or Office.	Circle.	Nature of Casualty.	Date of Occurrence.	REMARKS AND REASONS.
Wm. Charles Chatterjee	Compositor	Printing Office	...	Dismissal	1st April 1933	For absenting himself for 17 days without leave.
T. W. Thompson	Signaller	Mirzapore	C. India	Resignation	1st February 1933	To forfeit arrears of pay for leaving without giving the usual notice.
Lewis Beek	Ditto	Bombay	Bombay	Dismissal	8th Ditto	Habitual misconduct.
D. Bealy	Ditto	Ditto	Ditto	Resignation	31st March 1932	...
J. L. Collins	Artificer	Borra	Indore	Dismissal	7th April 1933	For assault on a Bear Bunnish in Borra and for previous misconduct.
S. Roberts	Signaller	Agre	Bengal	Resignation	19th Ditto	...
J. C. Hepburn	Ditto	Allahabad	Ditto	Ditto	Ditto	Declared ineligible for re-employment.
W. Smith	Ditto	Karnal	Madras	Dismissal	25th January 1933	For habitual drunkenness, insubordination and neglect of duty.
J. L. Patel	Accommodant	Cochin	Ditto	Resignation	31st March 1933	...
R. T. Wrightman	Signaller	Bangalore	Ditto	Ditto	27th Ditto	...
A. Venkumay	Ditto	Yellere	E Coast	Ditto	1st Ditto	...
R. Dalgarn	Cert. Supdt's Office	Madras	Madras	Services dispensed with	31st Ditto	...
W. C. Reedy	Signaller	Delhi	Punjab	Dismissal	10th February 1933	For using vulgar and abusive language at the instrument and for habitual misconduct.
D. Buckley	Md. Artificer	Madras	Madras	Ditto	21st April 1932	Neglect of duty.
J. W. Winter	Ditto	Ditto	Ditto	Death	29th March 1933	...
Venkumay Rajoo	Attender	Madras	Ditto	Services dispensed with	29th April 1932	...
D. Cole	Signaller	Indore	Indore	Dismissal	21st Ditto	Inefficiency and physical infirmities.
Shamrove Marjoe	Cert. Supdt's Office	Bombay	Bombay	Ditto	31st March 1933	Habitual absence without leave.
W. Lee	Signaller	Karnabee	Scind	Ditto	5th April 1933	For mis-appropriating the Cash Collections.
M. Nagappa	Ditto	Ditto	Ditto	Ditto	Ditto	Dysentery.
H. Maher	4th Inspector	Buddena	Ditto	Death	4th Ditto	...
Muty Lal Paul	Cert. Office of Director	Calcutta	...	Services dispensed with	20th Ditto	...
David	N. Artificer	Pegu	Pegu	Dismissal	14th Ditto	For absenting himself from duty for one month without leave and for reporting himself when in a state of intoxication.
W. Fuch	Artificer	Dacca	Dacca	Ditto	1st May 1933	...

(It has not been considered necessary to give the list of names both

DATE OF GAZETTE.		No. of Order.	DATE OF ORDER.		TEXT OF ORDER.
Month.	Date.		Month.	Date.	
1862.			1862.		
April ...	2 .	1067 ...	March ...	29 ...	<i>Appointments.—To be Assistant Superintendents in the Telegraph Department.</i> Mr. T. R. M. Henece. “ C. T. M. Naylor. “ P. Lowergan. “ W. St. Albis. “ W. R. Brooks. “ B. B. Flindell. “ C. B. P. Gordon. “ W. S. Stuart. “ J. R. Harris. “ E. F. Finch.
Ditto ...	22 ...	2031 ...	Ditto ...	22 ...	<i>Appointments.</i> Mr. T. R. M. Henece, to be a Superintendent. Mr. J. K. Toddhunter, to be an Assistant Superintendent.

APPENDIX NO. 2.

Abstract Statement of Receipts and Civil Administrative Charges of the Hyderabad Assigned Districts for the year 1862-63.

HEADS OF RECEIPTS.	Total Receipts 1862-63.	HEADS OF SERVICE.	Total Payments 1862-63.
L.—Land Revenue including Sayer and Abkaree	Rs. As. P. 59,41,321 8 7	B.—Charges against Income.	Rs. As. P. 3,95,369 3 10
IV.—Salt	50,788 9 7	I.—Land Revenue including Sayer Abkaree	...
VI.—Stamps	77,901 8 0	VI.—Stamps	...
X.—Law and Justice	24,401 7 0	F.—Civil Services.	...
XI.—Police	4,202 13 3	IV.—Police	1,52,880 4 3
XIII.—Public Works	400 7 4		5,48,199 7 1
XV.—Miscellaneous, Civil	30,902 8 1	Balance available for meeting Treaty and other payments	35,81,719 6 9
Total	41,29,918 13 10	Total	41,29,918 13 10

HYDERABAD RESIDENCY; }
The 22nd July 1863.

(Signed) G. U. YULE,
Resident.

PRINTED BY A. DOZET, HOME SECRETARIAT PRESS.

[Hyderabad.]

Report of the Librarian Boston exhibiting the numbers vacated and the expense of the Nature Vacations Extension, Nov. 1st 1863
1862 to 30th April 1863.

THE NEW YORK
COMMISSION

THE UNIVERSITY OF CHICAGO

Tabular Return showing the numbers vaccinated in the Hyderabad Assigned Districts, &c., and Military Stations of the Hyderabad Contingent, from 1st May 1862 to 30th April 1863.

VACCINATION ESTABLISHMENT, &c.	DISTRICTS AND BRANCHES, &c.	DESCRIPTION OF PERSONS VACCINATED.							RESULTS.		REMARKS.			
		Christians.	Mahomedans.	Hindus.	Others and others.	Males.	Females.	Children.	Adults and others.	Successful.		Unsuccessful.	Total.	Ratio per 100 of failures, omitting fractions.	Number of months during which vaccination was performed.
CIVIL ESTABLISHMENT. <i>Hyderabad Assigned Districts.</i> General Surg. Native Vaccinator with 1) From attached Nursing-hall ditto 1 ditto Yundarj-paloo ditto Yundiah ditto	Western Berar, Booldanah	0	52	121	19	728	64	132	10	171	21	193	10	12
	Ditto ditto	1	17	97	1	62	54	116	0	194	12	116	10	12
	Eastern Berar, Semrauttee	13	31	139	21	150	53	291	0	150	54	264	26	12
	Ditto ditto	9	14	159	7	144	36	199	0	107	72	180	40	12
	Total	23	114	507	48	2093	189	642	10	682	169	851	23	
<i>How Highways the Nazam's Talooks.</i> General Surg. Native Vaccinator Yundarj-paloo ditto Byed Abdool Kader ditto	Nolling	0	16	100	40	103	62	223	3	163	60	225	26	9
	Baebare	2	8	490	70	507	242	640	18	523	26	549	4	9
	Pharapore	0	17	0	0	0	0	0	0	15	2	17	11	1
Total		2	41	688	110	470	304	745	6	708	88	796	11	
<i>Hyderabad Resident</i> General Surg. Native Vaccinator Byed Abdool Kader ditto	Chudder Ghazi	20	492	164	113	387	311	890	9	693	15	708	2	12
	Total	20	492	164	113	387	311	890	9	693	15	708	2	12
MILITARY ESTABLISHMENT. <i>Hyderabad Contingent.</i> Assistant Surgeon C. T. Eves Assistant Surgeon F. B. Smith Assistant Surgeon G. D. Rodd Assistant Surgeon B. Williamson, M.B. Assistant Surgeon H. Crocker, M.D. Sub-Assistant Surgeon H. W. Smith	4th Cavalry H.C.	5	29	5	2	19	22	41	0	38	2	41	4	4
	2nd Cavalry H.C.	0	3	4	3	7	3	10	0	5	7	10	70	2
	2nd Infantry H.C.	2	0	1	0	2	0	2	0	0	0	2	100	1
	3rd Infantry H.C.	7	6	9	13	21	10	27	4	9	22	31	70	4
	4th Infantry H.C.	2	20	6	10	31	13	44	0	33	11	44	22	0
	Detach. 1st Cav. H.C.	1	11	17	2	18	13	28	5	24	7	31	22	3
	Detach. 3rd Cav. H.C.	17	74	38	80	98	61	150	9	108	51	159	32	
	6th Infantry H.C.	17	74	38	80	98	61	150	9	108	51	159	32	
	Total	17	74	38	80	98	61	150	9	108	51	159	32	
	Aurangabad	5	29	5	2	19	22	41	0	38	2	41	4	4
	Aurangabad	0	3	4	3	7	3	10	0	5	7	10	70	2
Edh-hyars	2	0	1	0	2	0	2	0	0	0	2	100	1	
Hingolae	7	6	9	13	21	10	27	4	9	22	31	70	4	
Lingapoor	2	20	6	10	31	13	44	0	33	11	44	22	0	
Detach. 1st Cav. H.C.	1	11	17	2	18	13	28	5	24	7	31	22	3	
Detach. 3rd Cav. H.C.	17	74	38	80	98	61	150	9	108	51	159	32		
6th Infantry H.C.	17	74	38	80	98	61	150	9	108	51	159	32		
Total	17	74	38	80	98	61	150	9	108	51	159	32		

HYDERABAD ESTABLISHMENT:
7th May 1863

2 (Signed) J. B. FLEMING, M.D.,
Superintendent of Vaccination, Hyderabad.

APPENDICES

TO THE

REPORT

ON THE

HYDERABAD ASSIGNED DISTRICTS,

FOR THE YEAR 1862-63.

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Statement of the Receipts and Disbursements of the Mysore Treasury from May 1881 to April 1882, showing His Highness the Rajah's One-fifth share of the Net Revenue, calculated in conformity to the principle laid down by His Excellency the Right Hon'ble the Governor General of India in His Lordship's Minute, dated 14th April 1884, and to the Orders of the Hon'ble the Court of Directors under date the 12th February 1886, and exhibiting the comparison with the former Year, as prescribed by Mr. Secretary Maddock's Letter of the 28th October 1889.

[Mysore.]

No.		Amount in 1880-81.		Amount in 1881-82.		Difference.	
		Rs. As. P.		Rs. As. P.		Increase.	Decrease.
	Gross Collections ...	97,22,424	2 1	1,00,22,520	13 11	3,00,096	11 10
	DEDUCT CHARGES.						
1	General Charges ...	2,02,591	15 2	2,07,519	7 3	4,927	8 1
2	Revenue Charges ...	17,01,512	0 0	15,86,063	0 9	0 0 0	1,02,590
3	Muzamut or Public Works Department ...	6,90,639	8 11	11,61,112	4 8	4,70,373	1 8
4	Judicial Charges ...	4,19,755	13 4	4,40,517	5 7	21,261	9 2
5	Military Charges ...	2,39,914	3 2	2,63,243	12 2	23,329	9 0
6	Pensions ...	92,125	4 1	97,979	11 6	5,854	7 4
7	Charitable Allowances ...	2,08,837	8 4	2,03,346	3 0	5,491	5 4
8	Medical Charges ...	50,291	5 6	64,758	4 8	14,467	3 2
9	Rajah's Fixed Allowance ...	2,50,000	0 0	2,50,000	0 0	...	...
10	Tacuary ...	2,901	0 0	1,338	0 0	...	1,563
11	Experimental Sheep Farm ...	4,898	11 10	0 0 0	...	...	4,898
12	Educational Institutions ...	43,574	3 2	43,182	1 6	...	392
13	Government Press ...	10,753	10 3	10,002	11 7	751	1 5
14	Horticultural Garden at Bangalore.	13,421	12 10	15,348	7 4	1,927	10 7
	Total Charges ...	42,67,098	6 8	46,48,908	6 9	3,81,810	9 2
	Net Revenue ...	54,55,325	11 7	53,73,714	7 3	...	81,611
	One-fifth of the Net Revenue ...	10,91,067	2 4	10,74,742	14 3	...	16,324
	Rajah's Fixed Allowance ...	2,50,000	0 0	2,50,000	0 0	...	...
	Rajah's Income ...	14,41,067	2 4	14,24,742	14 3	...	16,324
	FINANCIAL RESULT.						
	Total Gross Collections ...	97,22,424	2 1	1,00,22,520	13 11	3,00,096	11 10
	Amount brought to account, being the pay of individuals in the Bazar Establishment who have died without heirs ...	5,540	5 0	7,747	4 2	2,207	16 8
	Total ...	97,27,974	7 1	1,00,30,267	3 1	3,02,293	11 0
	Deduct Charges above ...	42,67,098	6 8	46,48,908	6 9	3,81,709	0 3
	One-fifth of the Net Revenue ...	10,91,067	2 4	10,74,742	14 3	...	16,324
	Subsidy ...	24,50,000	0 0	24,50,000	0 0	...	...
	Siladars ...	9,35,478	3 2	7,78,066	14 9	...	1,574
	Bargains ...	2,304	11 11	2,048	9 8	...	256
	Loss sustained from renting the Island of Seringapatam ...	29,908	4 0	27,120	11 7	...	2,788
	Total ...	64,76,046	1 8	60,51,692	5 7	4,24,354	9 4
	Surplus.	10,51,516	5 5	10,45,923	9 6	...	5,593

Net Increase.
3,81,709 0 3

Net Increase.
3,02,293 11 11

MYNOR COMMISSIONER'S OFFICE,
BANGALORE;
The 25th July 1892.

L. BOWRING,
Commissioner.

PRINTED BY A. DORR, HOME SECRETARIAT PRESS.

No. 11.

COORG COMMISSIONER'S OFFICE.

FROM

THE OFFG. COMMISSIONER FOR THE AFFAIRS OF COORG,

TO

THE SECRETARY TO THE GOVERNMENT OF INDIA,

Foreign Department,

FORT WILLIAM.

SIR,

I HAVE the honor to forward, for submission to His Excellency the Right Hon'ble the Viceroy and Governor General of India in Council, copy of the Administration Report received from Captain Elliott, Superintendent of Coorg, for the year 1860-61, together with a Financial Statement.

The Report does not call for any special remark. I regret to see that the anticipations of the previous year regarding the Coffee yield have not been fulfilled. The season did not prove as favorable as was anticipated, but there is every hope of a very large crop this year.

The Superintendent of Coorg will be requested to submit in detail his propositions on the subject of a revised Coffee Establishment, and I shall without delay submit them to Government for sanction in due course.

I have the honor to be,

SIR,

Your most obedient servant,

(Signed) CHARLES R. SAUNDERS,

Officiating Commissioner.

BANGALORE; }
The 12th August 1861.

ANNUAL REPORT

ON THE

ADMINISTRATION OF THE COORG DISTRICT,

DURING THE YEAR 1860-61.

No. 589.

FROM

CAPTAIN H. M. ELIOTT,

Superintendent of Coorg,

TO

THE SECRETARY TO THE COMMISSIONER

FOR THE AFFAIRS OF COORG,

BANGALORE.

SIR,

Dated Coorg, the 18th June 1861.

IN forwarding the usual Annual Jumma-bund Statements for the year Roudry 1860-61, I have the honor to submit my Report on the Administration of the Coorg Territories for that year.

The figures in the Finance Statement show an increase in the actual receipts for the year amounting to Rupees 8,928-12-4, which is principally gained from Miscellaneous Revenue, and while there is an increase in the expenditure of Rupees 6,901-7-11, which almost entirely arises from the expenditure on public works, the total revenue shows an excess over the total expenditure amounting to Rupees 1,59,472-15-7, which makes an increased surplus in favor of the District of upwards of Rupees 2,000 over the balance to its credit at the end of last year.

No season could have commenced more favorably for the prospects of the District than the last. The early showers in March, April and May gave every hope of a plentiful fall of rain in the Monsoon, and were most favorable not only to the cultivators of the soil but to the growers of Coffee and Cardamums, the two chief staple products of the country after Rice. The ryots thus encouraged by the prospects of a good Monsoon and the prevailing high prices of grain were led to till their lands vigorously, and to open out fresh lands freely. The Monsoon, however, was not a heavy or severe one after all, and though

this did not affect the cultivations, the want of sufficient sun at the proper time to mature the bean in the Coffee berry disappointed the expectations of the Coffee planters.

The increase this year on the actual cultivation of land paying Revenue as compared with the same cultivation of last year has been very considerable, amounting with the *Jody* lands to Rupees 8,248-6-6, or very nearly Rupees 4,000 over the increased cultivation of last year. The falling off in the value of the grain from Koomery lands and the Dhooly butta is owing to less land having been cultivated under Koomery this year, and to the price of grain being cheaper this year at the time of estimating the price to be paid in lieu of Dhooly butta than it was last year. Koomery has been strictly prohibited in Coorg, but Rupees 279-1-1 have been received on this account, owing to some jungles having been cut down and prepared for this cultivation, and which I permitted the people to cultivate this year only. There are some lands in the Yelloosavraseemay Talook, which are cultivated on the Buttaye tenure, and the price of this Buttaye grain this year amounts to Rupees 220-4-9 which is a loss as compared with last year of Rupees 44-8-5. I am surprised at this, as though in some few instances there were failures of crops still generally throughout the Talook, the crops were good, and I can account for it only by supposing the price of grain to have been cheaper at the time of sale than it was last year when this grain was sold. I have, however, requested the Soubadar's explanation on this point, and shall see that it is satisfactory. Remissions on account of failure of crops have this year been granted to the extent of Rupees 181-8-8, which is Rupees 147-5-7 more than was remitted last year. But of this sum only Rupees 17-4-3 is on account of actual failure in seed sown not springing up or maturing, *vis.*, Rupees 4 in the Nunjarajputten Talook, and the remainder Rupees 13-4-3 in the Yelloosavraseemay Talook. This remission was granted to 16 ryots of those Talooks. In the Yeddaynacknaad Talook a remission of Rupees 164-4-0 was granted to nine ryots, the whole of whose grain was burnt by an accidental fire along with their houses and all they possessed in them. If it had not been for this accident, the remissions this year would have been but a little over half that of last year. Although the net total increase on account of Land Revenue this year only shows an excess of Rupees 913-9-9 against a net total increase of Rupees 4,877-14-6 last year, yet an immense deal more land has been brought under cultivation from bunger during the year under report than in almost any former year, and the usual remissions on account of manium detract from a letter show in the net increase of land Revenue.

From Excise a Revenue of Rupees 49,640-11-10 has been derived, showing an increase over last year of Rupees 13,953-11-10. No Revenue has yet been gained from Stamps, none having been received for sale. I am happy to be able to report that the Abkarry which was this year taken under Government management has far exceeded my best expectations, and returned a sum of Rupees 45,616-11-10, which is Rupees 14,566 more than was received from the contractors last year. When on my annual tour through the Talooks, I frequently invited complaints by asking the people about the spirit they now received, but none were made, and all express-

ed themselves satisfied. From other rent of Farms which includes the items in the margin, only Rupees 1,024 were received this year against Rupees 1,637 last year, by which a loss of Rupees 613 has been sustained. These articles are yearly put up for sale and knocked down to the highest bidder.

Yellow dye Bark	margin,	only Rupees 1,024	were received this year
Red ditto ditto		against Rupees 1,637	last year, by which a loss of
Resin		Rupees 613	has been sustained. These articles are
Wax—Bees' Wax			
Honey and Turmeric			

The amount of Income Tax shown in the Returns Rupees 1,095 is only what has been stopped from the salaries of the Government servants under Schedule IV. I hope, however, before the 31st July, the end of the Income Tax year, to have completed the assessment for the whole District; I have found it utterly impossible to trust the Talook Soubadars with the assessment of this tax. Its novelties and intricacies are quite beyond them, and if the assessment was left to them, my whole time would be taken up with answering their queries and rectifying their errors. I have, therefore, agreeably to the provisions of your letter No. 160, dated 1st September 1860, determined upon adopting the lump and punchayet assessment, as that which will be not only the more satisfactory plan to the mass of the people but the more equitable one under present circumstances. I trust I shall be able to realize Rupees 7,000 from the Income Tax, which I believe to be a very fair average for the country.

Coffee this year yielded a Revenue of Rupees 32,103-2-2 which is an excess of Rupees 4,161-5-6 over that of last year. I am exceedingly disappointed at the smallness of the increase of the return in Coffee. There can be no doubt that the past year was not a favorable one to Coffee,—the berries that promised and looked so well on the trees turned out to a great percent nothing but pulp and light Coffee when picked; but great as this percentage undoubtedly was, still I do not think it satisfactorily accounts for the smallness of the Coffee Haulut this year, and the reduction of the tax by 9 pie on the maund, when the Coffee is exported in the hark, will not help much to account for the short return from Coffee. I have not been able to pay as much attention to this branch of the Revenue this year as I did last, owing to other more pressing calls on my time; I must, therefore, most reluctantly suppose a considerable quantity has been smuggled.

From Superintendent to the Secretary to Coorg Commissioner, dated 29th January, 1861.

To Superintendent from the Secretary Coorg Commissioner, dated 9th February, 1861.

Only one instance of smuggling has been brought to my notice, but owing to the shortness of hands in the Department,—I can have no doubt but that many occurred. I therefore earnestly beg with reference to the correspondence in the margin, to be allowed to send in a Statement for extra hands for this Department, and to put it on a somewhat new footing in regard to pay and establishments, as neither the present pay nor establishments are nearly adequate to the wants of the Department. Out of 1,22,869½ maunds exported this year no less than 1,17,223½ maunds were exported by the Native dealers and growers, and only 12,645½ maunds were exported by Europeans. Next year many of the gardens of the European settlers will have come into full or nearly full bearing, when a very considerable increase may be expected in the quantity exported by them,

and as the season promises well for the coming year's crop of Coffee, I have great expectations for the Revenue from the source generally next year.

From Mohaturpha Rupees 11,887-15-8 have been realised, showing an increase of Rupees 386-9-1 over the Revenue derived from this Mohaturpha. source last year, as the Commissioner's permission for remitting Mohaturpha to the payers of the Income Tax was not received till towards the end of April, when it was too late to alter the accounts, and no assessments were made. No deduction has been made from the Mohaturpha this year on account of Income Tax. In assessing the Income Tax, however, full allowance will be made to the payers of Mohaturpha. Cardamums have yielded Rupees 2,187-12-9 more this year than last, owing to the return from the Government jungles being far greater. But the price received for the Cardamums has not been quite as good, being Rupees 2-0-0 the maund less than it was last year. No Sandalwood whatever has been sold this year, consequently there is a decrease under this head of Rupees 4,632-11-5. Nuzzerkanikay, which is another of the items under the major head of Miscellaneous Revenue, shows an increase of Rupees 274-4-8 over last year, and sundries, another item of the same head, which gave last year Rupees 939-5-1, only returns Rupees 371-0-0 this year, by which a loss of Rupees 564-15-1 has been sustained.

The only point worthy of remark regarding the extraordinary Revenue is the increased amount of the tax levied on Shops; last year Extraordinary Revenue. the total sum levied was Rupees 825-1-6, and this year it is Rupees 181-12-4 more, or Rupees 1,006-13-10, which shows the increased prosperity of the weekly Bazars held all over Coorg. The total received on this account exceeds that of last year by Rupees 181-12-4.

An examination of Statement No. 3 will shew that the uncollected balance at the end of the year amounted to Rupees 75,241-13-5, which is Rupees 10,537-5-1 over what was the balance at the end of last year. The balance on account of arrears is this year only Rupees 706-9-10, whereas last year it amounted to Rupees 3,243-12-2, or Rupees 2,542-2-4 more than it was this year. A portion of this uncollected balance of Rupees 706-9-10, amounting to Rupees 122-4-1, will have to be remitted to two indigenet ryots in the Yeddaynacknaad Talook, who are unable to pay their Cardamum Tax, and Rupees 140-5-0 of the balance in the Mercara Talook, being Cardamum rent due by Mr. Main, will have to be struck off, as the tax paid by the Coffee grown on the land exceeds the Cardamum rent. Most of the remainder of Rupees 444-0-9 has since been collected, and only Rupees 7-8-9 remain outstanding.

Three Royal Tigers and nineteen Cheetahs have been killed this year, for the destruction of which rewards amounting to Rupees 72 Wild Beasts. have been paid, being a decrease on the sum paid last year on the same account by Rupees 40.

According to the census of this year the population amounts to 1,19,161, but this cannot be quite relied on as correct.

Population.

During the official year under review, 1,044 original suits were filed in the different Cutcheries of Coorg, 985 have been disposed of including suits which were pending on the 30th April 1860, and there now remains 102 undisposed of. The value of property sued for in the cases which have been determined amounted to Rupees 50,419-9-6, of which Rupees 41,105-14-7 have been decreed to be due.

Judicial.

Twenty-one appeal suits depended on the 30th April 1860, and 274 were instituted during the official year, of which 274 have been disposed of during that period, including suits which were pending on the 30th April 1860, leaving 21 depending on the 1st May, 1861.

Two poisonings, two highway robberies, two arsons, &c., shewn in the Statement No. 3, have been brought to notice and the perpetrators of them have been apprehended and brought to trial. The estimated value of property stolen amounts to Rupees 756-10-10, of which the sum of Rupees 306-4-5 has been recovered, and Rupees 450-6-5 remain unrecovered.

Thirty-three Courts of Inquests were held during these 12 months, of which 3 were upon the bodies of persons who were supposed to have committed suicide, and 30 on those whose deaths were occasioned by accident. Two of the persons who were supposed to have committed suicide were suffering from cholera pains, and put an end to their lives. One a female by hanging herself from the roof of her house, and the other by drowning himself in a well; the third case was that of a husband and wife who drowned themselves together in a tank in a fit of passion in consequence of the father of the former having abused him.

I have the honor to be, &c.,

SUPERINTENDENT'S OFFICE, COORG, }
The 15th June 1861.

(Signed) H. M. ELLIOTT,
Superintendent.

Financial Statement for the Coorg Territories—Revenue and Expenditure for the years 1859-60 and 1860-61.

REVENUE.		1859-60.	1860-61.
<i>Ordinary.</i>		Rs. As. P.	Rs. As. P.
Land Tax	.....	1,48,290 12 0	1,47,273 6 1
Excise and Stamps	.....	37,405 10 8	36,100 8 5
Postals, &c.	.....	.....	..
Income Tax	.....	.....	985 11 0
Miscellaneous	.....	72,436 13 4	61,007 4 9
<i>Extraordinary.</i>		Rs. As. P.	Rs. As. P.
General	.....	2,676 0 0	2,676 0 0
Judicial	.....	8,442 1 8	8,136 0 0
Revenue	.....	49,477 13 2	50,411 10 10
Excise and Stamps	.....	.....	...
Postals, &c.	.....	2,619 13 4	2,901 1 6
Miscellaneous	.....	6,004 3 10	6,320 9 9
Endowments to religious places of Wor- ship, &c. &c.	.....	14,130 3 10	14,130 3 10
Pensions	.....	11,627 9 3	11,373 8 0
Medical	.....	2,233 12 5	2,292 0 0
Educational Institutions	.....	3,870 0 0	3,870 0 0
Total Ordinary	.....	1,01,081 9 6	1,02,111 1 11
Extraordinary	.....	.....	.....
Public Works	.....	4,664 5 7	11,536 5 1
Grand Total Rupees	.....	1,06,745 15 1	1,13,647 7 0

COORG COMMISSIONER'S OFFICE,
BANGALORE;
The 12th August, 1861.

C. R. SAUNDERS,
Officiating Commissioner.

ANNUAL REPORT

ON THE

ADMINISTRATION OF THE COORG DISTRICTS,

DURING THE YEAR 1861-62.

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ANNUAL REPORT

ON THE

ADMINISTRATION OF THE COORG DISTRICTS,

DURING THE YEAR 1861-62.

SECTION I.

CIVIL JUSTICE.

1. • THERE are four descriptions of Civil Courts in Coorg, viz., the Superintendent's Court, the Durryaft Cutcherry Court, and the Courts of Soubedars and Parputtigars; and one Cutwall having the power of a Parputtigar.

Description of Civil Courts.

2. The Superintendent's and the Durryaft Cutcherry Court may be considered the Superior Courts, and the remainder, viz., eight Soubedars' Courts, and 28 Parputtigars' Courts, as Small Cause Courts.

Superior Courts.
Small Cause Courts.

3. The Parputtigar has jurisdiction in real and personal property, debt, damages, and other Civil wrongs up to 100 Rupees. The Soubedar and other Civil wrongs up to 200 Rupees. The Durryaft Cutcherry Court up to 3,000 Rupees, and the Superintendent from 3,000 Rupees up to any amount.

Jurisdiction of Superior and Small Cause Courts.

4. In suits not affecting land an appeal lies from the Parputtigar's Court to the Soubedar, and from the Soubedar a special appeal to the Durryaft Cutcherry, from whence there lies a species of irregular appeal to the Superintendent; but in the case of landed property, after the special appeal to the Durryaft Cutcherry, there is an extra special appeal to the Superintendent, and again an additional extra special appeal from his decision to the Judicial Commissioner of Mysore.

Appeal how lies.

5. There is a considerable falling off in Civil work this year as compared with last year, viz., a grand total of 674 original suits instituted in the year against 1,044 original suits filed the year previous, shewing a total decrease of Civil business in all the Courts of 370 cases. This decrease is apparent in all the Courts but the Superintendent's, where there is an increase by one case over the previous year ; but is noticeable chiefly in the Small Cause Courts, and is, I believe, to be accounted for by the introduction, in the month of August last, of Stamp rules, viz. Act.No. XXXVI of 1860.

Decrease in Civil business.

The Cause.

Previous to this, fees in lieu of Stamps were levied in the Durryaft Cutcherry and Superintendent's Court ; but no fees or costs of any description were leviable in Parputtigars' and Soubedars' Courts. This imposition of fees in cases previously exempted, together with a difficulty experienced by comparatively uncivilized people in mastering the provisions of the Act, will, I think, sufficiently account for the decrease of business in the Lower Courts, and also account for the lesser number of cases filed in the Durryaft Cutcherry Court ; for although fees were previously leviable in that Court, yet they were only imposed after deciding the suit, a delay which rather encouraged improvident or litigious suitors, who are now compelled to pause and think before filing a suit, as the institution fee stamp has to be purchased before filing the suit. Again some suitors hoped to, and perhaps did escape, by alleged or real poverty, absconding, or making away with their property, from paying the fee subsequently imposed upon them. The collecting of which also gave Courts and Soubedars extra and seemingly unnecessary labor, so that the introduction of Stamp rules will, I think, operate most beneficially, and be a fair and litigation-discouraging tax on suitors of all classes in all the Courts.

6. Including suits instituted in the year, and those pending from the year previous, there were 61 cases pending at the close of this year against 102 cases remaining undecided at close of the year previous, which is nearly the same result as last year, considering the greater number of suits instituted in that year.

Cases pending at close of year.

7. Out of the total number of 715 cases disposed of in the year (made up of suits pending in the previous and those instituted during the past year,) 637 cases were decided in favor of Plaintiff, and 78 cases in favor of Defendant. The proportion of decisions in favor of Plaintiff being 89.09 against 56.90 the previous year.

Cases how disposed of.

8. In addition to the above, 715 original suits were decided during the year, 163 appeal cases were filed against 274 appeal suits for the year previous, and 24 appeal cases remain as pending this year against 21 appeals remaining undecided for the year previous, which is an unfavorable comparison ; both original and appeal business having been less this year.

Appeal suits, filed, decided and pending.

And out of the 160 appeal cases settled in all during the year (made up of the appeals instituted during the year, and appeals remaining from last years),—

In 74 cases the decree of the Lower Court was confirmed.

In 37 cases it was modified.

In 11 cases it was reversed.

2 cases were sent back for re-investigation and

3 cases were transferred to the Revenue file.

Total ... 160

9. The number of appeals during the year bear a proportion of near 22½ per cent. to the number of original suits decided during the same period, being an improvement over the preceding year, when the proportion of appeals was close upon 28 per cent.

10. The average duration in each case of appeal was 18 days against 10 days for the previous year, and the total amount of value in litigation in the 163 appeal cases filed during the year was Rupees 12,379, giving nearly an average of Rupees 76 in each appeal suit.

11. The average number of days occupied in the disposal of each original suit was 19 days, whilst the average last year was but 14 days. The total value of property litigated was Rupees 67,850-8-9 against Rupees 41,105-11-7 for the previous year. The average amount litigated in each suit was Rupees 57-3-11 against Rupees 41-11-8 for the year previous. Of the above amount in the 715 cases decided, Rupees 47,111-15-7 was decreed to be due, and Rupees 6,186-9-1 or about 11½ per cent. was disallowed. The proportion of suits to population is about one suit to 175 persons, and descending to further particulars, it gives about the sum of Rupees 1-11-0 as litigated by each inhabitant.

The sum imposed as fees on suitors in the Superintendent's and Durrayaft Cutcherry Courts amounts to Rupees 746-13-11, of this sum Rupees 690-5-9 was recovered, leaving a balance of Rupees 56-8-2 to be recovered.

12. The Table below shows by what Courts and in what proportions the Civil work of the year has been carried on :—

CLASS OF COURTS.	Original suits decided.	Appeal suits decided.	Total original and appeal suits decided.
Superintendent's Court	1	56	57
Durrayaft Cutcherry Court	30	50	80
Soubedars' Courts	267	54	321
Parputtigars' Courts	417	0	417
Total	715	160	875

13. The 715 original suits disposed of during the year, and the 61 cases remaining in arrears at the end of the year, are classified as follows:—

NATURE OF SUITS.					Decided.	Remaining.
I.—SUITS AFFECTING LAND.						
Miscary rights	...	...	...	...	0	0
Landed property	...	...	...	...	12	10
House property	...	...	...	...	12	1
Mortgages	...	...	...	...	2	0
Total					26	11
II.—PERSONAL SUITS.						
Debts					558	39
Division of property					14	3
Personal property					27	0
Cattle					13	1
Security					36	3
Wages					28	0
Caste Disputes					0	0
Damages					13	4
Total					689	50
Grand Total					715	61

Suits affecting division of property may be considered as mixed suits, so that the proportion of suits for landed property to personal suits is about 4 per cent.

14. The 160 appeals disposed of during the year, and the 24 appeal suits remaining pending at the close of the year, are classified as follows:—

NATURE OF SUITS.					Decided.	Remaining.
I.—SUITS AFFECTING LAND.						
Miscary rights	...	...	...	...	1	0
Landed property	...	...	...	...	26	8
House property	...	...	...	...	5	2
Mortgages	...	...	...	...	1	0
Total					33	10
II.—PERSONAL SUITS.						
Debts	...	...	...	...	85	8
Division of property	...	...	...	...	4	2
Personal property	...	...	...	...	15	1
Cattle	...	...	...	...	11	0
Security	...	...	...	...	4	0
Wages	...	...	...	...	6	1
Caste Disputes	...	...	...	...	0	0
Damages	...	...	...	...	2	2
Total					127	14
Grand Total					160	24

15. There were in all four Civil debtors imprisoned for debt during the year. None, however, remained in confinement at the end of the year, as for a longer period than 10 days; the average of imprisonment being 10 days; having all of them satisfied their creditors, and obtained their release.

Civil Debtors.

16. The amount realized by the sale of Stamps, since their introduction into the District up to the end of April 1862, was Rupees 3,691, but I am unable to ascertain how much of this Stamp paper was used strictly in Judicial proceedings and pleadings.

Judicial.

17. The numerical results detailed above, though not quite satisfactorily contrasting with the previous year, yet on the whole do not appear to be unfavorable.

General Remarks.

SECTION II.

CRIMINAL JUSTICE.

Part I.—Penal Statistics.

18. The Criminal statistics of 1861-62 will be found tabulated in the Annual Statement on the subject, which accompanies. The filling up of column 3, viz. "total crimes, the perpetrators of which have not been apprehended," seems to have been misunderstood, as this column appears as a blank, and it is now too late to call for the requisite information from the Taluoks and rectify the error. For the same reason column 1, viz. "total crimes, the commission of which has been brought to notice," will also be incorrect.

Criminal Statistics.

19. The superior and subordinate Criminal Courts are presided over by the same officials as dispense Civil Justice. Neither Parputtigars, Soubedars, nor the Durrayst Cutcherry Court have independent jurisdiction of their own in Criminal cases; Parputtigars and Soubedars cannot decide upon the simplest case of theft; but in petty offences, such as assault, using abusive language, being drunk, and the like, they have the power to fine up to 5 and 10 Rupees respectively, and only in the case of default in payment can they imprison, viz. up to 10 and 14 days respectively. Similarly the Durrayst Cutcherry Court can inflict a fine up to 20 Rupees, or in default to award up to two months' imprisonment; and the Durrayst Cutcherry can only take up and try such Criminal cases as are referred to them by the Superintendent, when they can award punishment up to two years' imprisonment; subject, however, to the Superintendent's approval and confirmation. The Superintendent has power to fine to the extent of 30 Rupees, and imprisonment for seven years. Sentences requiring a severer punishment can only be awarded by the Judicial Commissioner of Mysore.

Superior and Subordinate Criminal Courts, and their powers.

20. The Table below is an Abstract of the usual Annual Statement, altered to show the state of crime for the year under review, and which includes 8 cases pending from the previous year ; as also to exhibit a comparison of the same with the year previous ; but owing to the error before noticed the Table has reference only to traced or discovered crime.

No.	CRIME.	1860-61.	1861-62.	Increase.	Decrease.
1	Murder ...	0	1	1	0
2	Manslaughter ...	1	1	0	0
3	Infanticide ...	1	1	0	0
4	Poisoning ...	2	0	0	2
5	Rape ...	1	1	0	0
6	Wounding with a knife ...	0	2	2	0
7	Arson ...	2	0	0	2
8	Highway robbery ...	2	0	0	2
9	Robbery ...	4	7	3	0
10	Forgery ...	0	1	1	0
11	Serious assault ...	0	1	1	0
12	Branding a female with an Iron ...	0	1	1	0
13	Cattle-stealing ...	5	7	2	0
14	" Wounding ...	1	0	0	1
15	Bribery ...	1	2	1	0
16	False accusation ...	3	4	1	0
17	Theft ...	15	32	17	0
18	Swindling ...	0	1	1	0
19	Forcibly snatching away property ...	1	0	0	1
20	Escaping from custody ...	2	0	0	2
21	Fraud ...	2	3	1	0
22	Destroying Government Sandal-wood ...	1	0	0	1
23	Digging for supposed hidden Treasure ...	0	1	1	0
24	" in search of concealed property ...	0	1	1	0
25	Assault ...	2	3	1	0
26	Break of Abkarry Rules ...	1	0	0	1
Total ...		47	70	35	12
Net Increase ...		0	0	23	0

21. The prisoner in the single murder case was charged with murdering his wife by strangling her. He was, however, acquitted of the charge, and the evidence tended to prove it was no murder, but that the deceased had committed suicide by hanging herself. The prisoner in the manslaughter case was also acquitted. His wife charged him with purposely striking her and her child with a stick, the blow of which caused the death of the latter ; but it seemed rather that in a quarrel with each other the mother fell, and thus caused the death of the child. In the case of infanticide, the Court only brought the prisoner in as guilty of the concealment of the birth of her child, which was born dead, under extenuating circumstances. The prisoner charged with rape was also acquitted of the charge, and convicted only of a drunken assault. The two cases of wounding with a knife were not serious. In the forgery case also the prisoners were ultimately acquitted by the Judicial Commissioner. Robbery has increased by three cases ; but there have been no highway robberies during the last year. The remaining cases do not call for any particular remark ; nor does the net increase, viz. 23 in the category of crimes,

Review of the above.

seem to require further notice than what can be observed on the face of the above Table; and though there is an increase by 17 in thefts, they were not, however, of a serious nature.

22. The number of minor or petty offences has increased by 143, viz. 820 offences against 677 for the year previous.

23. Assuming the total population of Coorg to be 118,352 souls, the number of cases of crime ascertained to have been committed will bear a proportion to the population as follow. Those crimes which are detailed in paragraph 20, as one to 1,690 souls. And petty offences as one to 144. The total of crime and offences giving an average of one offence to 133 souls.

24. I believe it may fairly be alleged that there is nothing like organized crime in Coorg. Wuddurs and some particular sects of Jungle tribes appear to be the chief perpetrators of crime. Regular cattle lifting seems also unknown, and it has before been noticed that there have been no gang robberies last year.

25. The value of property stolen is computed at Rupees 1,161-14-0, of which sum Rupees 793-8-5, or about 68 per cent., was recovered. The year previous Rupees 756-10-10 was stolen, and Rupees 306-4-5, or 40 per cent., recovered, which tells favorably for the year under report.

26. Eight Criminal cases remained undisposed of at end of the previous year, and 13 cases remained undisposed of at end of this year. The Criminal work disposed of during the year may thus be classified, and the percentage of convictions shewn as follows :—

CLASSIFICATION OF CRIMES AND OFFENCES.			Number of Crimes.	Number of Prisoners.	Number Convicted.	Number released.	Percentage of Convictions.
Crimes against the person	...	...	17	59	44	15	74
Crimes against property	...	...	53	124	72	51	58
Total	...	...	70	183	116	66	63
Minor offences	...	...	820	1,297	1,173	124	90
Grand Total	...	...	890	1,480*	1,289A	190B	87

* If from 1,480 be deducted one prisoner discharged, totals of A and B will amount to 1,479.

* From 1,480 prisoners 13 must be deducted as being concerned in more cases than one, thus leaving a balance of 1,467 prisoners.

A. In the same manner 11 must be deducted from 1,289, leaving 1,278 prisoners.

B. For same reason deduct two from 190, leaving 188 prisoners.

27. The Statement below shews by what Courts the above prisoners were convicted or released; as also the number of Criminal cases disposed of by the several Criminal Courts.

DESCRIPTION OF COURTS.	Convic	Relea	Number Cases
Tried by Superintendent with Punchayet, and sentenced by Judicial Commissioner ... }	...	1	1
Ditto by Durrayaft Cutcherry and Soubedars, and sentenced by Superintendent ... }	131	66	88
Ditto and sentenced by Durrayaft Cutcherry with approval of Superintendent ... }	48	44	51
Ditto and sentenced by Soubedars, being minor offences ...	422	28	250
Ditto and sentenced by Parputtigars, being ditto	677	49	470
Total ...	1,278	188	890

N. B.—The total of 1,278 and 188 amounts to 1,466, to which if be added the discharged prisoner will make 1,467, as shewn above by the asterisk.*

28. The nature of the punishments inflicted during the year are shewn in the accompanying Table.

Detail of punishments.

PARTICULARS OF PUNISHMENTS FOR 1861—62.					Number.
Hanged and transported	...	...	...	...	0
Imprisonment for 20 years and under 7 years	...	...	...	...	0
Ditto 5 "	...	...	...	...	2
Ditto 3 "	...	...	...	...	0
Ditto 2 "	...	...	...	...	9
Ditto 12 months and under	...	...	...	...	8
Ditto 6 "	...	...	...	...	8
Ditto 3 "	...	...	...	...	20
Fined	...	...	...	...	1,117
Flogged	...	...	...	...	0
Dismissed	...	...	...	...	2
Fined, or imprisoned up to 14 days in default in Lower Courts					92
Total	...	...	...	...	1,258
Required to furnish security	...	...	...	...	20
Grand Total	...	...	...	...	1,278

Flogging. Flogging as a punishment for crime is not sanctioned in Coorg.

Government servants punished. 29. Two servants of Government were dismissed, after Criminal trial, during the year, viz :—

- 1 Jail Darogah.
- 1 Jail Mutsuddy.

Casualties. 30. The following Statement exhibits the casualties for the year under report, and comparison of the same with the year previous :—

	1860-61.	1861-62.	Increase.	Decrease.
Suicides	4	4	0	0
Accidental deaths	30	25	0	5
Total	34	29	0	5
Net Decrease	0	0	0	5

Criminal Fines. 31. The total Criminal fines for the year under report amount to Rupees 2,787-13-3.

General Remarks. 32. The introduction hereafter of the Penal Code will, I think, cause a more correct classification of crime, especially for the purpose of comparison. The year under review appears an ordinary one as regards crime, and the general result detailed above may perhaps be considered satisfactory.

Part II.—Police.

No regular Police Establishment. 33. There is no regular separate Police Establishment in Coorg, the ordinary routine duties of Police being performed by the Peon Establishments attached to the several Cutcheries or Courts. Their total number, which includes Duffadars, Dalayets, Peons and Colcars, and the Establishment attached to the Coffee H<ut and Forest Departments amounts to 258, and their total monthly cost to Rupees 906.

Jumma ryots perform various Police duties. 34. There is a class, however, of the Coorg population called jumma ryots, at present 3,771 in number, who, in return for a comparatively light assessment and the privilege of claiming uncultivated land under certain restrictions and conditions to, it would appear, an indefinite extent

upon "jummah" tenure, (a word which signifies "birth right" and invests the holder with a certain limited proprietary right in the land,) owe and acknowledge a sort of feudal service to the State. In the former Rajah's time this feudal tenure extended to the training in and use of arms for actual Military service, whilst in various other ways the jummah ryots were at the disposal of the State. Latterly, however, their services have only partially been availed of in escorting prisoners and treasure to the Sudder Station, and generally assisting the Cutcherry Establishments in arresting offenders, keeping guard over them, and such like duties, as well as in various revenue and miscellaneous matters. Within my short experience I have seen large numbers of these ryots turn out armed to apprehend a sepoy who had escaped from Military custody, and on another occasion a jummah ryot seized a Yerrawar lurking in the jungles, which led to the apprehension of two of his accomplices, and all three were subsequently convicted of robbery.

It is difficult, and perhaps unadvisable, to estimate the cost of these jummah ryots. They hold 8,59,405 butties of land, for which they pay an assessment to Government of Rupees 45,217-8-11. Captain Le Hardy calculated that a jummah ryot on an average paid from 19 to 25 per cent. of the gross produce of his farm to Government. Besides it would take many years before their lands would realize much more by any other mode of assessment, supposing their jummah rights were not indefeasible. Captain Martin writes that their "privileges cannot be commuted simply for an immunity from such (*i. e.* Police) duties, as they are dependent upon long established and irrevocable rights;" and to continue quoting from Captain Martin's letter, as explanatory of the head of Police—"It may be said that there is no directly paid establishments for Police purposes in Coorg. The Police of the country are, and have been from time immemorial, the jummah ryots, who, from the circumstance of their enjoying certain privileges above their fellows, are required to perform the service of Police."

"These ryots are summoned at a moment's notice in any numbers, and from their local knowledge, their training to arms, their habits and characters, and from the peculiar nature of the country, no body of Police could be conceived more thoroughly efficient, either for detective purposes, or for the suppression of disturbances, while at the same time they are perfectly inoffensive to the peaceful inhabitants of the country. It is no hardship to them to perform such services, and no system could be devised which would afford more comfort and confidence to the people."

35. The statement below shows the remuneration to village potails and inferior village servants, either in ready money, or remissions in assessment. The duties of these potails and village servants are much the same as in other parts of India, so that a moiety of the total cost is properly chargeable to the Police.

No.	NATURE OF REMUNERATION.	Rs. As. P.		
139 (a)	Potails enjoying land on joree tenure assessed at ... * ...	1,811	12	10
340 (b)	Ditto drawing money allowance of 9 pie per 4 Rupees of revenue collected ...	1,334	1	7
479	Total of Potails — Total of remuneration being	3,145	14	5
93	Coolwadies or village servants enjoying land free of rent amounting to ... * ...	497	2	0
131	Ditto enjoying land on joree tenure assessed at ...	355	12	1
224	Total of Coolwadies — Total remuneration being	852	14	1
703	Grand total of Potails and Coolwadies { Grand total of remuneration being ...	3,998	12	6

(a). These are potails beyond the barriers of Coorg, they hold lands mostly proportioned to the size of village and amount of collections. Their office is hereditary, and they enjoy in addition to the above a few local, and, it is believed, voluntarily paid perquisites, the most valuable being donations on occasions of marriages in the village.

(b). These are potails within the barriers, drawing a money allowance on the amount of the collections realized from their respective villages, and who enjoy no other perquisites. Their office is not hereditary, being elected by the people subject to Circular confirmation.

It will be noticed from the total number of coolwadies that more than half the villages of Coorg have no other village official than the potal, whose remuneration, particularly in villages within the barriers, is but scant.

36. The pay of the stipendiary peons is not commensurate with the great increase in the rates of wages in these parts, and which must eventually prove a drawback to their efficiency. Their number too might perhaps be advantageously increased on looking at the increasing population in towns and their growing importance; a system of Town Police might be found to prove beneficial to the interest of the communities of some of the most thriving towns.

37. The stipendiary peons are too few in numbers, and comparatively too unimportant to give rise to complaints against them by the inhabitants of the country. Reasons have been shewn above accounting for the popularity of the jumamah ryots; and the general working and

efficiency of the Police as at present constituted will be better gathered and appreciated from a perusal of the Criminal statistics than from any detailed observations.

Part III.—Jails.

38. In all 80 prisoners were received into the Sudder Jail during the year, the daily average being 56. The year previous the daily average was 40 prisoners.

Jail Report.

39. The table below is a comparative statement of Jail expenditure for last year and the year previous :—

ITEMS.	1860-61.	1861-62.	Increase.	Decrease.
	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Permanent Jail Establishment and } Guards.	1,236 0 0	1,230 15 4	0 0 0	5 0 8
Contingent Jail Guards ..	251 0 6	334 11 8	83 11 2	0 0 0
Total cost of dieting ...	949 10 10	1,121 10 3	171 15 5	0 0 0
Do. clothing ...	60 3 0	104 14 0	44 0 0	0 0 0
Do. country medicines and Hos- } pital charges ... }	3 10 2	37 9 11	33 15 9	0 0 0
Total ...	2,500 8 6	2,829 13 2	329	5 0 8
Net Increase ...	0 0 0	0 0 0	329 4 8	0
Average annual cost of prisoners } per head ... }	62 8 2	50 8 6	0 0 0	0
Net decrease in annual cost ...	0 0 0	0 0 0	0 0 0	11

Though the total expenditure is in excess of last year, yet it has been only in necessary items consequent on the increased number of prisoners; and the total comparison of expenditure to number of prisoners will be seen to be very favorable for the year under review.

40. The form below is a detail of each prisoner's actual cost yearly to the State, Average cost of each prisoner. already treated of generally in the preceding paragraph :—

ITEMS.	AVERAGE YEARLY COST PER HEAD.*							
	1860-61.		1861-62.		Increase.		Decrease.	
	Rs.	As. P.	Rs.	As. P.	Rs.	As. P.	Rs.	As. P.
Average cost of permanent Jail Establish- } ment and Guards ... }	30	14 9	21	15 9	0	0 0	8	15 0
Do. of Contingent Jail Guards ...	6	4 5	5	15 7	0	0 0	0	4 10
Do. of dieting ...	23	11 7	20	0 7	0	0 0	3	11 0
Do. of clothing ...	1	8 0	1	13 10	0	5 10	0	0 0
Do. of country medicines and Hospital } charges ... }	0	1 5	0	10 9	0	9 4	0	0 0
Total ...	62	8 2	50	8 6	0	15 2	12	14 10
Net Decrease ...	0	0 0	0	0 0	0	0 0	11	15 8

It will be seen from this that the average cost of each prisoner per head per annum has been reduced from Rupees 62-8-2 to Rupees 50-8-6, and Comparison of same with the previous year. that the improvement is to be noticed under all the heads except medicines and clothing. The increased cost here seems owing to more attention being paid to the comforts of the sick, and not from an increase of sickness, the rate being more favorable for the year under report, viz. a percentage of 2.75 sick against 3.56 for the previous year. The decrease in diet is owing to certain Jail provisions being cheaper last year than the year previous, especially in the matter of paddy, where, owing to the greater cheapness last year, the saving in this item of diet alone, computing at the former year's prices, is about Rupees 2-12-0 per head. And there being a greater number of prisoners over which to divide the cost of Jail Establishment, and permanent and contingent Jail Guards, will explain the favorable decrease under those respective heads.

41. The above form thus shews that the cost of physicking, feeding and clothing each prisoner has been Rupees 22-9-2, whilst the cost of Cost of feeding and guarding prisoners. looking after and guarding him was Rupees 27-15-4; but this latter charge will proportionately diminish as prisoners increase, and seems to be the only one susceptible of a decrease, and it is necessary to observe here that, in addition to the ordinary Jail guards, there is also a Military guard Military Guard. stationed at the Jail, the presence of which, doubtless, tends to the safe custody and good conduct hitherto characterizing the working of the Jail.

42. The number of deaths in Jail during the year was two, or 3.37 per cent. ; the year previous there was but one death among the prisoners, Health, &c., of prisoners. being 2.50 per cent. The sickness too has been slight both last and previous year, averaging in both years under 4 per cent., or, as before stated, 2.75 per cent. last year against 3.56 the previous year. The total of sickness and death is 6.32 against 6.06.

43. There are no Jail manufactures, neither is industrial or educational instruction afforded. The prisoners were chiefly employed in keeping Prisoner's work, or how employed. the Jail and Cutcherry grounds clean, repairing roads in the vicinity of Mercara, cutting and bringing in fuel, and leaf platters for their own use, making charcoal (a considerable quantity of which is used in the Cutcherry to preserve the records and papers from the great damp in the monsoon), and also, among other minor works, in planting and watering a small road side avenue of trees.

44. The value of prisoners' labor here, where wages are high, even if taken at half the rate of that of an ordinary free laborer, will give Value of prisoners' labor. an average of about 30 Rupees as the yearly value of each prisoner's labor.

45. The Table below gives a few miscellaneous particulars regarding the 80 Miscellaneous Prison parties. prisoners of last, and the 43 prisoners of the year previous:—

YEAR	SEX OF PRISONERS.				Total.	Previous Convictions.	First Convictions.	Total.	Who can read and write.	Ignorant Prisoners.	Total.	Percentage of previous Convictions.	Percentage of reading and writing Prisoners.
	Men.	Women.	Boys.	Girls.									
1860-61 ...	37	6	...	...	43	2	41	43	2	41	43	4.65	4.65
1861-62 ...	76	5	...	...	80	6	74	80	16	64	80	7.50	20.00

The percentage of previous convictions is rather heavy for the year under report, but 4 out of the 6 previously convicted prisoners were concerned in one case, viz. of serious assault when under the influence of liquor, having been convicted of an almost similar offence under similar circumstances the year previous. These 4 persons can also read and write; so could 4 in the Forgery case, 3 in a case of swindling, and 1 in cattle stealing, which makes up 12 out of the above 16; but altogether the inferences to be deduced from the percentages are to be regretted, as indicating the prevalence of crime amongst those who should know better.

Escapes.

46. One prisoner, whilst occupied in out-door labor, effected his escape; but was re-captured the same day.

General Remarks.

47. The conduct of the prisoners has been generally good, and there has been no infringement of Jail regulations brought to notice.

SECTION III.

REVENUE.

Part I.—Land Revenue.

Jummabundee Settlement.

48. The Jummabundee Settlement of the year under report was commenced on the 21st October 1861, and concluded on the 30th March 1862.

49. The tenure of land in Coorg is somewhat peculiar and singular for India, so I beg to transcribe, as far as the 71th paragraph, some interesting particulars on the subject, gathered from Captain Lie Hardy's Jummabundee Report for 1831-35.

Nature of Land Tenure.

50. The whole of the arable land of Coorg is divided into farms, averaging in

Arable land how divided.

* For an account of the Coorg butty see pages 101 and 102.

extent, according to the nature of the land, from 25 and 70 butties* to 1,500 butties of wet land, besides a large quantity of high land bearing no assessment, attached to the farms. This unassessed dry land is divided into two classes called "banay" and "barakay." The former term

Banay and barakay. being applied to high forest land, from which the farm is supplied with fire-wood, manure, grass, &c. The barakay is a low, swampy inferior description of soil on which the cattle are turned out to graze. This banay and barakay compose the greater portion of most farms. Though seldom more than a small garden patch of vegetables and plantains adjoining their houses was cultivated by the Coorgs in former times, the other oastes planted small patches of chillies and tobacco; but now a considerable portion of the banay is everywhere planted with coffee, plantains, and oranges, the cultivation of which is still extending.

51. Although all jummah ryots enjoy the privilege of claiming land to an indefinite extent upon the jummah tenure of 5 Rupees per 100 butties of wet land, with its accompanying banay and barakay, they can only hold it upon those terms after being invested with the proprietary right to the soil by payment of a nuzzur of Rupees 10 per every 100 butties. This is termed "nuzzur kanakay," and the

Jummah tenure.

amount has to be paid to Government in three yearly instalments, besides paying down a fee of 1 Rupee at the time called "guttee jummah" fee, guttee meaning a lump of earth. In return each jummah ryot receives a handful of the soil of the land he applies for, and a formula of words is spoken intimating that he has received the hereditary proprietary right of the land, with the banay and barakay attached. In the same way when a jummah ryot wishes to give up his farm, he brings a handful of earth taken from the soil of his farm and lays it down before the Superintendent, and thereby intimates that he has resigned his farm, and all his rights thereto. Land cannot be taken on jummah tenure except in entire farms, and on paying rent for the uncultivated as well as cultivated wet fields of which they are composed. When part of a farm only is taken, the portion occupied is invariably held by jummah as well as sagoo ryots, on sagoo tenure, and is assessed at 10 Rupees per 100 butties. On which terms most jummah ryots cultivate pieces of land in addition to their hereditary estates, which latter, as before mentioned, are assessed at 5 Rupees per 100 butties of land.

52. No remission is ever made from the assessment of ryots holding land on jummah tenure, except in any very extreme cases of calamity.

Jummah tenure.

They may, however, claim remissions when the produce of their land has been so meagre as to render it advantageous to them to hold their estates on sagoo tenure, viz. paying 10 Rupees per 100 butties for the quantity of land actually cultivated, instead of 5 Rupees per 100 butties for the whole farm.

53. Jummah ryots have also a right to be assessed on the same terms as sagoo

Jummah ryots.

ryots, when owing to the want of means, less than half

the land of which their estates are composed has been cultivated. Jummah ryots also pay dhooly batta and house tax.

54. Sagoo tenure at 10 Rupees per 100 butties was the assessment originally fixed by Veerajainder on the whole of the arable wet land within the barriers of Coorg. But the aborigines of the Coorg caste have never paid this amount of rent, except under peculiar circumstances, or, if found guilty of the commission of heinous crimes, when they were at that time disfranchised and disgraced by being transferred to the 2nd class of sagoo ryots. Sagoo tenure is only applicable to inhabitants of other castes, who, not being deemed qualified to carry arms in the service of the Rajah, were called upon to pay the full amount of this tax. This class of sagoo ryots were, however, in the Rajah's time, required to perform all other services not of a Military nature. These ryots also pay dhooly batta and house tax.

55. Sagoo ryots of the 2nd class paid 12 Rupees for 100 butties, and were exempt from the payment of dhooly batta; but paid house tax. This class does not at present exist, having been transferred in 1835 to the 1st class. Originally most ryots holding under sagoo tenure were of the 1st class; but in Veerajainder's time being transferred to this class from the 1st, or in other words paying 12 instead of 10 Rupees per 100 butties, minus the dhooly batta tax, exempted the ryot so transferred from the performance of many services to the then State; consequently the majority of ryots came into this class. Latterly, however, the Circar service seems to have increased, so that the distinction was lost sight of, and both classes of sagoo ryots appear to have had to perform the same duties.

56. Lands under sagoo tenure have also attached to them the banay and barakay referred to in paragraph 50. Sagoo ryots pay only for the fields which they actually cultivate, and they are considered entitled to a remission of part of the rent of such lands as may have yielded a scanty crop. This, however, may be considered the ancient custom, as the practice now is, and seemingly very properly so, only to grant remissions in extreme cases.

57. Land is held on oomlee tenure at three different rates, viz. 3, 2½ and 1 Rupee per annum per 100 butties. Estates were granted on these terms as a reward for service, the possessors, however, having to pay the same demands as jummah ryots, in respect to dhooly batta and house tax.

58. Persons holding land free of tax are exempted from the payment of all other Circar demands, and they are allowed to sub-let their lands; but only on the common sagoo tenure, viz. 10 Rupees per 100 butties, without imposing dhooly batta or house tax.

59. The foregoing tenures are applicable to the whole of the country within the barriers of Coorg including Kiggutnaad, but they do not affect Yelloosawaraseemay, or the small patch of country at the foot of the ghauts.

Above tenures relate to land within the barriers.

60. The whole of this talook is, in the same manner as lands within the barriers of Coorg, divided into vurgas or farms, which are composed of wet and dry lands, in about equal proportions. The assessment being supposed to be regulated at $\frac{1}{4}$ of the estimated produce of the former, commuted into a money rent of 5 butties of paddy per 4 Rupees.

Yelloosawaraseemay land tenure.

61. The ryots of Yelloosawaraseemay are divided into two classes,—one consisting of the original inhabitants, by whom the greater part of the land is held direct from Government; the other is for the most part composed of emigrants and poorer description of ryots, who hold the land on "warum" tenure, i. e. sharing the gross produce with the landlord; but this sub-letting is at variance with the older customs of Coorg.

Ryots of Yelloosawaraseemay.

Sub-letting.

62. The proportion of dry arable land attached to a piece of paddy ground, assessed at 16 Rupees, varies from 1 to $2\frac{1}{2}$ cawnies, and the value of its gross produce, consisting generally of raggee, horse gram, or ginjely seed, is estimated at from 4 to 9 or 10 Rupees. This portion is never assessed, except when taken for cultivation without the wet land, in which case it is held from the Circar on "warum" tenure.

Proportion of dry arable land attached to wet land.

63. Waste, grazing and forest land is not, as within the barriers of Coorg, attached to estates; but is considered as common to the village to which it belongs.

Grazing and forest land.

64. The ryots of Yelloosawaraseemay talook are not called upon for dhooly batta, but they pay house tax.

Pay house tax, but not dhooly batta.

65. Excepting a few fields, there is no assessed dry land within the barriers of Coorg, dry cultivation prevailing only in Nunjarajputten, Ramasawmy Canaway, and in the northern part of Yelloosawaraseemay, where there is a scarcity of water for the purpose of irrigation. Its extent in these talooks is calculated at about 18,000 cawnies, assessed at about Rupees 7,475-1-10, the greater part of which has been brought under cultivation since the assumption of British rule.

Dry land within and beyond the barriers.

66. The assessment here is calculated at about $\frac{1}{4}$ to $\frac{1}{2}$ of the gross produce, and the ryots cultivating these dry lands, which produce the same nature of crop as in Mysore, are the worst off in Coorg. The chief reason being that they each cultivate but very small patches of land, though here and there several families cultivate in common a large portion.

Assessments how calculated.

67. Coomaree cultivation is prohibited in Coorg, raggee is sometimes sown, looking like coomaree cultivation; but it is only preparatory to planting coffee the succeeding year.

Coomaree land.

68. A large quantity of land has been alienated to the office of the potails of Yelloosaweraseemay and Nunjarajputten, and for maintenance of religious establishments in all parts of Coorg, half the assessment of which has been relinquished by the Circar.

Joree land.

Within the barriers land enjoyed under this tenure differs very little from that which is held by jummah ryots. The amount paid to the Circar is the same; it cannot be sub-let, and if left uncultivated, it is like jummah land, at the disposal of the district Officers, and it may be given by them to ryots desirous of cultivating it on sagoo tenure. The difference in the latter case is, that when so disposed of, half of the assessment is paid to the Circar, and the other moiety to the establishment to which it belongs. Another point in which it differs from jummah land is that no assessment is paid for cultivated portions of it. The holders of joree land in Yelloosaweraseemay are allowed to sub-let it on warum tenure, and in that talook the greater part of it is so disposed of.

69. Ryots cultivating less than 25 butties of land pay no dhooly batta; from 25 to 50 butties they $\frac{3}{4}$ putta butties of paddy, and from 50 and upwards $1\frac{1}{4}$ putta butties of paddy, excepting in Guddynaad and Yeddavanaad, where they pay $\frac{2}{3}$ of a putta buttie for each Rupee of assessment.

Dhooly batta.

Dhooly batta is not paid in Yelloosaweraseemay and Nunjarajputten, excepting in four villages. Neither was it paid by 2nd class sagoo ryots when that class existed.

70. The whole of the cultivating classes of the Naads to the south of the Haringhy river, and of Soorlabesmoothnaad to the north of it, pay house tax at the rate of Rupees 0-9-7 per family, and the same amount is paid in the remaining divisions of Coorg by all classes, except Pariahs, who in Yelloosaweraseemay, Nunjarajputten, Guddynaad and Yeddavanaad, pay only half that sum. Merchants and other classes pay according to their caste or trade.

House tax.

71. In calculating the proportion of gross produce paid by the different descriptions of ryots in Coorg, one is very apt to exaggerate the total gross produce, so that the following rough calculation is merely given to shew the relative advantages enjoyed by each class of ryot. *A jummah ryot pays, with dhooly batta, which in no case can exceed $1\frac{1}{4}$ putta butties of paddy, valued now at 2 $\frac{1}{4}$ Rupees, about 15 per cent. of his gross produce to Government. He also pays house tax Rupees 0-9-8. †A sagoo ryot within the barriers, including dhooly batta, pays in the same manner from 25 to 30 per cent. of his gross produce to Government; he also pays house tax. The sagoo

Proportion of gross produce paid to Circar.

* By jummah ryots.

† By sagoo ryots.

ryots of Yelloosawaseemay Talook are, I believe, in a better condition than the sagoo ryots within the barriers, though those who cultivate as sub-renters to them are necessarily not so; and last of all come the ryots cultivating dry lands, who, for the reason stated in paragraph 66, appear to be the worst off.

72. A Coorg cannot sell his farm, nor even sub-let it, without the permission of the Circar and then it can only be sub-let on warum tenure for a limited number of years, so that, excepting the permission to resign the farm to Government, a Coorg's property in his land may be considered unalienable.

Coorg farms.

73. In former times several farms constituted one estate, cultivated by the several members of one large family, living under the same roof; but of later years instances occasionally occur of relations dividing the family property and taking separate farms. This, however, can only be done by the consent of all parties; for, according to law or usage, any individual separating himself from the family in opposition to the general wish, can claim no share of the common stock. He is viewed as an outcast by the remainder, and is left to depend entirely on his own resources and industry for the means of livelihood. The most aged is generally regarded as the master of the house. The estate is registered in his name, and the whole of the family property, as well as the services of its inmates, are considered as being at his disposal.

Joint families.

74. The Rajahs appear to have rather encouraged, than otherwise, separation of families, probably as a means of decreasing the practice of polyandry, (N. B., this practice is now denied by the Coorgs, but I believe a Coorg may raise up seed to his brother's widow) as well as with the view of extending cultivation. The generality of the Coorgs, however, still view any deviation from this ancient custom with the greatest abhorrence, considering the separation of brothers, (under which denomination is comprised the whole of the males of each generation being under the same roof, however distant their connexion) or their forming independent connexions, as the most serious calamity that can possibly befall a family. But estates do appear now to be sometimes divided into their separate farms, and these farms again are occasionally sub-divided amongst the several members of the same family. My information on this point, however, is not satisfactory, and time will not permit of looking further into the question, but I believe former Superintendents have set their faces against sub-division, and issued orders on the subject conformably to what would appear to be the old Coorg custom; and when the evils of sub-division of land, terminating eventually in minute partitions in other parts of India, are considered, perhaps the ultimate condition of the Coorg is bettered by the restriction.

Evils of sub-division.

75. The above is mostly gathered from Captain Le Hardy's Reports altered slightly to bring it down to the present time, and though the sketch is necessarily imperfect, owing to my short residence and personal unacquaintance with particulars, yet I have ventured to give it, and risk some

Retrospect.

inaccuracies, rather than not attempt some description of the singular and interesting tenures of Coorg so different to those generally existing in Southern India and the Dekkan. A Coorg's house, nestled on a hill side, partially concealed by plantain, orange, and coffee trees, with his paddy land below, his forest above, and wild scenery around, presents a picturesque and striking scene, may be soon become civilized enough to resist the baneful influence of his increasing prosperity and growing vice, and learn to look upon the retention of his patrimonial acres and education of his children as a sacred duty dearer to him than easily begotten money.

76. The principles of settlement, and the mode of ascertaining the reason for and method of granting remissions are, I think, what may be called, for want of a better name, ryotwarry.

Principles of settlement.

Number of Talooks, Naads, and Villages.

77. The following Statement shows the number of Talooks, their sub-divisions into Naads, and the sub-divisions of the latter into villages:—

No.	NAMES OF TALOOK.	No.	Vill.	Jagheer Lag.	Unin- ted Vil.	
	Mercara Talook	57	57	0	0	57
	Paddynacknaad Talook	55	55	0	0	55
	Yeddannacknaad "	49	49	0	0	49
	Kiggutnaad "	63	63	0	0	63
	Nunjaraiputten "	115	105	3	7	115
	Yelloosawerasoomay "	168	167	0	1	168
	Total	27	507	496	8	507

78. I believe there are no disputes regarding village boundaries; both village and naad boundaries having been settled, defined, and recorded in the former Rajah's time, and the "shisht" account, signed by the Rajah's Lingarajendar and Dodda Veerajainder, were referred to, and enabled the settlement of certain isolated disputes that occurred some years back. These shisht accounts are very complete, entering into full details, and will prevent a fertile source of disputes hereafter when land becomes more valuable.

Boundary settlement.

79. Although wet cultivation forms the chief agricultural element in Coorg, still it is altogether independent of artificial means of irrigation. The paddy land being situated in valleys or hollows between hills, is, in addition to the heavy rains, well supplied with water from mountain and hill streams, and rivalets, the course of which, or of their minor streams,

Nature and sources of irrigation.

are dammed up, when necessary, with temporary erections, to raise the level of the water. These dams are of the narrowest and simplest description, and cost nothing beyond a small expenditure of labor in their construction.

80. The extent of land at present under wet cultivation is estimated at about 21,23,044 butties, assessed at Rupees 1,30,156-5-7, and Cultivated and cultivable wet land, area, and assessment. about 3,15,658½ butties is estimated as waste wet land; but for want of water about a lac of butties only is capable of being cultivated. The assessment on which would be about the sum of 10,000 Rupees.

81. There are however, I am told, five cuttays or small anicents, erected of brick, with stone aprons, in two different localities of Coorg, where the nature of the country admits of artificial Artificial irrigation. irrigation. Four of these cuttays were erected under native and one since British rule, and have been repaired subsequently, but are understood not to be in very good repair at present.

The following table will give short particulars of this description of irrigation :—

NAME OF TALOOK.	NAME OF CUTTAY.	Number of butties at present irrigated.	Assessment upon the same.	No. of butties waste but susceptible of irrigation.	Assessment if cultivated.
			Rs. As. P.		Rs. As. P.
Nunjarajputten ..	Cheggali Cuttay ..	7,475	544 0 0	3,756½	375 10 0
Ditto ..	Igoor Cuttay ..	8,911½	582 10 10	3,192½	319 4 0
Ditto ..	Yelakanoor & Hoshully Cuttays ...	9,351½	749 12 0	1,113½	111 6 0
Mercara ..	Uthimugala Cuttay	8,318½	579 14 0	2,815	281 8 0
	Total ...	34,056½	2,456 4 10	10,877½	1,067 12 0

The irrigated cultivated land is thus divided :—

	Butties	Rs. As. P.
Enam land ...	4,603	0 0 0
On sagoo tenure ...	20,437½	2,043 12 0
„ jummah „ ...	4,217½	210 14 0
„ oomlee „ ...	1,130	23 4 10
„ jodee „ ...	3,567½	178 6 0
Total ...	34,056½ *	2,456 4 10

Three reasons are assigned for there being so much waste, viz. that some of the lands are of a higher level than the existing irrigation channels. That population is but scant in those localities, which is accounted for in the third reason, viz. the extreme unhealthiness of some of the localities. The men being prostrated with fever and spleen disease, and the women bearing few or no children, those that are born seldom living beyond childhood.

82. In 1854 the then Superintendent of Coorg advocated the construction of an anicut across the Lutchmunteertha River, in Kiggutnaad Talook ; and two more across two nullahs in Yelloosawera-seemay Talook, by which means a considerable quantity of land now lying waste might be brought under cultivation. As coffee cultivation extends, the consumption of rice and other grains will be much greater, so that any increase of the quantity of land brought under wet cultivation will be very beneficial.

83. It is difficult to arrive at the area in acres of dry cultivation ; but the present assessment on dry culture only amounts to Rupees 9,713-9-6 ; and an extent of land calculated to yield an assessment of but Rupees 1,134-2-10, is said to be the only cultivable dry waste land remaining. This, however, does not include forests, hills and jungles.

84. The number of cultivating ryots, who have lands of their own, is given below at 11,272 ; but by a statement prepared in the Office, it would appear that other 7,619 persons are also mostly engaged in agricultural pursuits, giving a total of 18,921 resident persons, occupied, either directly or indirectly, in tilling the soil.

CULTIVATORS.	1861-62.	1860-61.	Increase
Jummah ryots	3,553	0	0
Sagoon „	6,535	0	0
Oomlee „	317	0	0
Ryots cultivating dry land	837	0	0
Total	11,272	11,208	64

It is not customary in Coorg to grant a paothee or puttah to each ryot, but only a general puttah for the whole village. This general puttah, and a memorandum under the Talook authorities' seal is the ryot's title to the land ; but jummah ryots hold for each vurga or farm a neeroopa or sunnad under the seal and signature of the Commissioner of Mysore, or of the former Rajahs.

Rent roll.

85. The subjoined Statement is an approximate rent roll for the district :—

Rate of annual payment.	Number of ryots.	Total rent.	Average payment of each ryot.
		Rs. As. P.	Rs. As. P.
From 1 to 10 Rupees	6,444	33,400 6 11	5 2 11
" 10 to 20 "	2,881	43,630 10 3	15 2 3
" 20 to 30 "	1,027	25,494 5 8	24 13 2
" 30 to 40 "	454	15,229 10 7	33 8 8
" 40 to 50 "	224	10,266 8 1	45 13 3
" 50 to 75 "	173	10,574 5 5	61 1 11
" 75 to 100 "	51	4,398 2 5	86 3 9
" 100 to 150 "	18	2,049 11 5	113 13 11
Total ...	11,272	1,45,045 12 9	12 13 10

In a similar average made for one of the Hyderabad Assigned Districts, the total was Rupees 20-12-0, and the difference between the sum and Rupees 12-13-4 in some measure represents the difference of assessment, which is much lighter here. There are ryots, it is believed, who pay more than Rupees 150 on the whole of their holdings; but which being situated in different Talooks have been assessed separately on the individual.

The next form gives the same result, with particulars of the several classes of ryots :—

DESCRIPTION OF RYOTS.	Number.	Total amount of assessment.	Average rate of payment.
		Rs. As. P.	Rs. As. P.
Jumrah ryots - - -	3,533	45,211 15 11	12 11 7
Sagoo " - - -	6,535	84,424 14 0	12 14 8
Oomlee " - - -	347	6,902 14 4	19 14 3
Ryots cultivating dry land. -	537	8,505 15 9	10 2 7
Total. -	11,272	1,45,045 12 9	12 13 10

N. B.—In all the above averages the house tax has been included, viz. Rupees 6,757-21-10, which distributed over the total number of ryots, viz. 11,272, gives an average payment for each ryot under this head of Rupees 0-9-7 and a fraction.

86. Below is given the same average for each of the Talooks, and which may be taken as a fair criterion of their present condition as regards agriculture, Kiggutnaad being the best agricultural Talook, and Nunjarajputten and Yelloosaweraseemay Talooks the poorest :—

Number	TALOOKS.	Number of ryots.	Total assessment.			Average payment of each ryot.		
			Rs.	As.	P.	Rs.	As.	P.
1	Mercara - -	1,278	16,641	7	8	13	0	4
1	Paddynacknaad -	1,372	17,945	0	7	13	1	3
1	Yeldavanaad -	1,598	32,364	13	3	20	4	0
1	Kiggutnaad - -	1,357	35,069	8	0	25	13	5
1	Nunjarajputten -	2,987	17,441	12	8	5	13	5
1	Yelloosaweraseemay -	2,680	25,583	2	7	9	8	8
6	Total -	11,272	1,45,045	12	9	12	13	10

87. And the following will serve to give an idea of the extent in butties of each ryot's holding :—

EXTENT OF HOLDING.					Number of ryots.	Number of butties.	Average holding in butties of each ryot.	
From	15	to	50	Butties	...	8,221	130,096½	40
"	50	to	100	"	...	2,337	232,333½	97
"	100	to	200	"	...	2,519	486,670	190
"	200	to	400	"	...	1,505	558,262½	370
"	400	to	800	"	...	622	310,797½	664
"	800	to	1,000	"	...	177	167,213½	944
"	1,000	to	1,500	"	...	50	68,141½	1,362
"	1,500	to	1,800	"	...	9	14,845	1,693
"	1,800	to	2,000	"	...	1	1,961½	1,961½
"	2,000	to	2,916	"	...	3	6,780	2,262
"	5,000	to	5,000	"	...	1	3,711½	3,711½
Total					...	10,435	20,16,918½	193 *

* So in original.

The total of butties given here excludes jagheer, service, and charitable enams, &c., and does not refer to dry lands, or ryots cultivating them. The dry land measurement differing so that it is difficult to estimate it.

88. The season for the year under report was a most favorable one. Crops of all descriptions came to maturity at the proper time, and in general yielded an abundant harvest. Rice the staple product of the country produced a plentiful crop, except in one locality, where high freshes of the Cauvery partially washed away some paddy fields and necessitated a small remission. The coffee crop was favorable in some localities, and unfavorable in others ;

25,361½ additional butties of waste wet land have been taken up by the ryots. Considerable quantities of Government and other land still continue to be taken up by Europeans and Natives for the cultivation of coffee. The prospects of coffee in the coming season are promising, and the same may be said with regard to cardamoms. In short the state of the country is, and promises still more so to be, one of continued, though perhaps unequally divided, prosperity.

92. The table below shows the selling prices in the four principal marts of Coorg, of its chief indigenous grains and other agricultural products; as well as a comparison of the same with the year previous:—

NAME OF TOWN.	Year.	MERCHANT'S RETAIL SELLING PRICE PER RUPEE IN SEERS OF 80 RUPEES WEIGHT.					WHOLESALE SELLING PRICE PER CANDY OF 20 MAUND OF 27½ lbs EACH.	
		Paddy	Rice 1 st sort.	Rice 2 nd sort.	R.	Horse Gram.	Coffee	Cardamoms
Maceata	1860-61	50	14	18	38			
	1861-62	52	15	20	38½			
Veerapuderpett	1860-61	45	14	16	28			
	1861-62	51	16	17	29	19		
Fuserpett	1860-61	40	14	17½	51	31		
	1861-62	46	11	18	51			
Sannawapett	1860-61	62½	14	21½	40½	31		
	1861-62	60	14	23	45	19½		

{ From 110 Rs. to 125 Rs. { From 900 Rs. to 1,000 Rs.

Paddy and rice, it will be observed, are selling at cheaper rates this than last season, which is owing to the greater yield, and to more land having been taken up; but more particularly to there having been a less heavy demand for rice on the Malabar Coast, where also there was a plentiful harvest. Still, however, looking at the full crop, prices (which have risen most considerably looking back only for a period of five year) have been most remunerative to the grower in this chief product of the country. On the other hand it will be noticed that horse gram, which is mostly imported, has risen very much in value, and this rise in price has happened in almost every article of import for Mysore and neighbouring countries. Oils, ghee, sugar, chillies, betel-leaves, areca-nuts and cocoanuts have all risen very considerably in price, and seemingly in accordance with the rise of prices perceptible all over Southern India, which, though it affects fixed incomes, is not felt by the large mass of the population, viz. the laboring and working classes, as the wages of labor have risen more than in proportion to the rise in prices.

As a set off also against the above, the price of coffee has risen nearly 25 per cent. in value, and I calculate that the profits to growers in this enhanced price alone amounts to about 3 lacs of Rupees.

The price realized by cardamoms in the year under report has reached the highest figure yet known, viz. from 900 Rupees to 1,000 Rupees per candy, being an increase in price of about 12½ per cent., and thus fully, if not more, than compensating the growers for the decrease in quantity of

this season's crop. It has been well remarked by a known English writer on Coorg, that a good cardamom ground or garden is a mine of wealth to its possessor, and this saying is being in a measure verified, cardamoms are getting scarcer, and consequently dearer, as coffee cultivation extends into its limits, and as the Coorg cardamom is very much esteemed on account of its superior color and aroma, the fortunate holders of unexpired portions of cardamom leases, who have not been induced to sell or otherwise part with them, will realize still larger profits next and succeeding years.

Remission.

93. The following table shows the amount and particulars of remissions made at the last jumma bundee :—

Talooks.	For losses incurred by fire			For failure of crops from want of water.			For loss of crops by floods.			Total remissions.		
	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.	Rs.	A.	P.
Sunjarajputten ..	6	7	0	27	7	0	0	0	0	33	14	0
Yelloowaraseemay	0	0	0	2	10	5	0	0	0	2	10	5
Paddanacknuel ...	45	6	0	0	0	0	19	14	0	65	4	0
Yedilavannaal ...	12	0	0	0	0	0	0	0	0	12	0	0
Total	63	13	0	29	1	5	19	14	0	112	12	5

The total amount of remissions granted the year previous was Rupees 181-8-3. The decrease being Rupees 67-11-10. The principle of remissions is liable to abuse, and sometimes countenances carelessness, and here where the soil is so fertile and assessment light, remissions do not seem necessary as a general rule. The amount of remissions is gradually decreasing, and doubtless the ryots will become more provident. Yet, perhaps, it is still too early to discountenance remissions when judiciously granted, as in the case of floods and fire, &c.

94. The following table exhibits the gross and net land revenue with particulars, Gross and net land revenue. and a comparison of the same with the previous year :—

PARTICULARS OF LAND ASSESSMENT.	1900-01.	1901-02.	Increase.	Decrease.
	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Wet land on sagoo tenure ...	65,508 1 3	60,666 11 11	4,163 10 6	0 0 0
Ditto jumrah	42,530 4 0	45,217 6 11	2,667 2 11	0 0 0
Ditto gonilee	6,928 14 7	6,922 11 4	0 0 0	26 0 3
Total of wet cultivation ..	1,34,963 3 10	1,41,777 1 2	6,810 13 7	26 0 3
Net increase ..	0 0 0	0 0 0	6,814 14 4	0 0 0
Dry land on sagoo tenure ...	7,171 8 6	6,437 3 5	1,305 10 11	0 0 0
Garden land on	439 14 1	440 6 2	1 8 1	0 0 0
Total dry cultivation ...	7,610 6 7	6,877 9 7	1,267 4 0	0 0 0
Grand total of wet and dry ...	1,42,572 10 5	1,50,654 10 9	8,082 0 4	0 0 0
Gonice in kind of dhooly batta ...	14,493 10 7	14,442 6 2	51 11 7	0 0 0
Ditto heomary	279 1 1	0 0 0	0 0 0	279 1 1
Ditto other grains	220 4 9	50 0 1	0 0 0	150 11 8
Total in kind ..	14,993 0 5	14,531 13 3	58 11 7	409 15 1
Net increase ..	0 0 0	0 0 0	7,710 12 2	0 0 0
Wet and dry land pottee chann	6,078 3 0	6,135 8 1	56 5 1	0 0 0
Grand total of land revenue ...	1,63,351 14 10	1,71,321 15 1	7,770 1 3	0 0 0
Deduction—				
Reduction of waste land as per hookoom- ment	9,422 7 0	9,200 3 1	0 0 0	132 3 11
Amount of Potals' remuneration ..	2,316 4 2	2,340 6 7	24 2 5	0 0 0
Ditto of remissions	181 8 3	113 12 5	0 0 0	67 11 10
Total ..	12,320 3 5	11,744 6 1	24 2 5	600 13 9
Net decrease ...	0 0 0	0 0 0	0 0 0	575 13 4
Balance net land revenue ..	1,51,031 10 5	1,59,577 9 0	7,770 1 3	
Add decrease in deductions ...	0 0 0	0 0 0	575 13 4	
Net Increase ..			8,345 14 7	

* So in original.

95. Of the Rupees 6,814-13-4 net increase in wet cultivation, but Rupees 57-1-6 is an actual increase, the remaining Rupees 6,757-11-10 being amount of house tax collected from cultivators and included in the land revenue, whilst formerly it was placed under the head of moturpha. The Rupees 57-1-6 real increase represents the higher rate of assessment now chargeable on wet land, which was given out on easy terms (or on cowl) when first taken up as waste for cultivation.

In dry cultivation. The increase of Rupees 1,267-3-0 in dry cultivation has been realized as follows :—

Rupees	967	15	1	owing to increased cultivation.
„	299	3	11	from higher rate of cowl.

Total Rupees 1,267 3 0 assessment as mentioned above.

The increase of Rupees 38-11-7 in dhooly batta is owing to increased cultivation. The decrease of Rupees 279-1-1 in koomary is owing to the cultivation having been prohibited. The decrease of Rupees 130-14-8 in value of other grain collections in kind arises from a decrease of warum cultivation, or bhuttaye, in Yelloosawerascemay Talook.

The decrease of Rupees 532-3-11 in reductions is on waste or cowl land brought under cultivation, and now falling into full assessment, as explained already; but it appears incorrect charging on land revenue the full amount of assessment of lands not at present due, and then deducting the same again, minus that portion of the cowl assessment actually collected; and that the more correct way would be only to charge the amount which falls in every succeeding year, and omit altogether the lump sum which is only due hereafter.

The decrease of Rupees 67-11-10 in remissions explains itself, and the increase of Rupees 24-2-5 in the remuneration paid to potails is accounted for in the increased collections, out of which they are paid their percentage; though the debiting the land revenue for this item in the manner shewn in*the form appears hardly necessary.

96. Deducting from the net increase of Rupees 8,845-14-7.

Net increase in land revenue. as shewn in paragraph 94, the sum of Rupees 6,757 11 10, apparent increase

revenue. of Rupees 6,757-11-10, apparent increase, by the bringing in of house tax collected from cultivating ryots under the head of land revenue, there is left but the sum of Rupees 1,588-2-9 as representing the actual increase of land revenue last year as compared with the year previous. And apart from the consideration of jungle and forest land cultivation, the land revenue of Coorg appears to have almost reached its limit, and to be not susceptible of much further extension.

What the falling in of cowl lands will give in succeeding years is shewn in the margin. This, and perhaps some 10,000 Rupees more for extended wet, and 2 or 3,000 Rupees more for increased dry cultivation, is apparently the greatest limit the land revenue of Coorg, as at present constituted, can reach; though irrigation works, &c., will necessarily bring a further increase.

97. The progressive yearly increase in the land revenue derivable from new waste lands, brought under cultivation on cowl assessment, is shewn in the margin; and upon which full assessment is now charged in the accounts, with subsequent corresponding deductions, as alluded to in paragraph 95. This cowl revenue may not keep pace with the figures shown in the statement from subsequent relinquishing of the lands, and such like causes, or other land now under cultivation may be abandoned for it, but yet the table on the whole will not be far from the actual increase.

Particulars showing in what yearly proportions the coal assessment falls in as it becomes due													
Full assessment of the waste land at present given out on terms of coal.		1861-62.	1862-63.	1863-64.	1864-65.	1865-66.	1866-67.	1867-68.	1868-69.	1869-70.	1870-71.	1871-72.	1872-73.
Mo. Ar. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
9,682 7 0	532 3 11	1,723 13 6	3,461 16 3	4,981 7 1	6,797 1 4	8,133 14 3	9,010 14 11	9,229 0 4	9,250 7 10	9,269 6 8	9,282 5 8	9,290 3 1	

98. Subjoined is a comparative statement of the total of extra sources of revenue for this and the previous year, shewing net increase of Rupees 60,224-15-7.

	1860-61.			1861-62.			Increase.			Decrease.		
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
Miscellaneous or extra revenue ...	1,32,426	1	3	1,92,651	0	10	60,224	15	7	0	0	0

The net increase would be more by Rupees 6,757-11-10, if we consider that amount in house tax collected from cultivators, transferred from this head to land revenue. Particulars of this increase will be given hereafter in a separate statement of the extra sources of revenue.

99. Below is given a statement of the revenue under all heads which shows a net increase of Rupees 68,570-14-2 in favor of the year under report :—

	1860-61.			1861-62.			Increase.			Decrease.		
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
Land revenue ...	1,51,231	10	5	1,59,577	0	0	8,346	14	7	0	0	0
Extra sources of revenue ...	1,32,426	1	3	1,92,651	0	10	60,224	15	7	0	0	0
Total ...	2,83,657	11	8	3,52,228	9	10	68,570	14	2	0	0	0

The inelasticity of the land revenue has been explained before ; but nearly one-third of the above extra revenue is realized from cardamoms and coffee. The nature of cardamum cultivation obliges the present system in lieu of a land tax, so that in a measure the revenue realized from cardamom grounds may be considered as land revenue ; as also a certain proportion of the coffee haulut, as being raised from untaxed land.

100. The amount of demand of all sources of revenue for the year under report is Rupees 3,52,228-9-10, of which the sum of Rupees 2,72,208-10-7 was collected within the year, leaving a balance of Rupees 80,019-15-3 (against Rupees 75,101-8-5 similarly uncollected in 1860-61) remaining uncollected at end of the official year. The greater part of this sum has since been collected.

101. A sum of Rupees 75,101-8-5 being the amount of revenue remaining uncollected at end of the year previous, was also collected within the year under report, leaving a balance of Rupees 1,367-14-1 still uncollected chiefly on account of cardamom tax. Measures will be taken to prevent an occurrence of similar delay in future.

102. There will be no irrecoverable balance for the year under report or for the year previous; but a sum of Rupees 122-4-1, an uncollected and irrecoverable balance on account of cardamom tax for the year 1856-57 still appears in the accounts, and for the striking off of which permission from the Government of India will shortly be solicited.

103. To account for the seemingly heavy balance remaining uncollected at end of the year, it is necessary to state that, with the exception of the Nunjarajputten and Yelloosawerascemay Talooks, in all other parts of Coorg, two out of three total kists, or instalments by which the land revenue is payable, do not fall due until after expiration of the year. And two cardamom kists, and a proportion of coffee haulut, and abkarry also, is not paid within the year. It is calculated that about Rupees 70,000 and odd, out of the Rupee 3,52,228-9-10 total revenue of the past year, was not due till after expiration of the year. Though on a judicious apportioning of the time for the ryot paying his kist rests in a great measure his prosperity, and I am aware that a former Superintendent advocated the present period of payment of kists, yet it would simplify the accounts if measures could be devised for collecting the bulk of revenue, if not all of it, within the year itself.

Coercive process.

104. No coercive measures, either of distraint or sale, were resorted to in the collection of the revenue.

Tuconvee.

105. No tuconvee, or advance to cultivators, was made during the year.

Part II.—Miscellaneous or extra sources of Revenue.

Statement of extra sources of revenue. 106. The following table gives particulars of the extra revenue under all heads for the year under report, and a comparison of the same with the previous year:—

Items.	1890-91.			1891-92.			Increase.			Decrease.		
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.
Abkarry	47,926	2	7	70,880	1	6	22,953	12	11			
Opium and other drugs	680	9	2	1,563	5	3	871	12	0			
Coffee haulat	22,108	2	2	26,445	5	9	4,337	3	7			
Cardamom rent	26,225	10	1	27,964	0	10				1,731	0	2
Sandalwood				26,943	11	3	26,943	11	3			
Various jungle produce	874	6	0	429	2	8	445	12	8			
Nasser kaniway fee	2,173	0	0	1,220	0	0				953	0	0
Guttee jumma fee	102	0	0	63	0	0				39	0	0
Moturpha	11,687	18	2	4,390	0	4				7,297	18	4
Shop tax on market days	1,100	7	7	1,314	1	8	213	10	1			
Income tax	1,086	5	0	5,017	14	0	3,931	9	0			
Sale of judicial stamps				3,711	7	6	3,711	7	6			
Judicial fines	2,707	5	11	2,066	10	10	641	6	11			
Honey, bees' wax, resin, and wood dye, petty contracts	1,064	0	0	1,443	0	0	379	0	0			
Unclaimed property	854	5	10	1,383	0	0	529	3	2			
Sale of stray cattle	606	12	10	530	5	4				66	10	6
Fines for cattle trespassing				646	8	2	646	8	2			
Stoppages from public servants				9	14	9	9	14	9			
Stamping cloth	117	13	7	111	5	6				6	7	11
Gain by exchange	0	12	8	15	9	4	15	11	6			
Total	1,22,108	18	2	1,92,280	0	10	69,990	11	6	9,737	2	0
Sundry miscellaneous items	220	2	1	201	0	0	71	5	11			
Do not decrease	1,22,428	1	3	1,92,079	0	10	69,993	1	7	9,737	2	0
				Net Increase			60,234	12	7			

107. With the exception of a sum under 1,000 Rupees, the remaining abkarry revenue is derived solely from the sale of spirituous liquor. Reports on the above abkarry. The climate and country favor the consumption of strong drink, and it is feared that drunkenness is on the increase, which will require every precaution, and a strong hand to keep down. The manufacture and wholesale sale of the liquor is a Government monopoly, or under amanie management, which is better perhaps than farming the revenue, and thus making the contractors directly and pecuniarily interested in increased consumption, and sometimes in encouraging other vices and crimes growing out of drink. This amanie management doubtless causes some part of the present increase in the profits, which would otherwise go.

to the farmer, and further by the check to the practice of interdicted private distilleries. The illicit manufacture of rice-arack being prevalent at one time, and still I believe occasionally resorted to, and the increase will be further accounted for in the growing prosperity of the country and inhabitants, and the additional number of emigrants and liquor-consuming coolies attracted to the country owing to increased coffee cultivation.

Opium. The same remarks apply generally to the increase in opium and other drugs.

Coffee. The increase in coffee indicates an extended cultivation and export of this important article of commerce.

Cardamoms. As the cardamom forests are leased out for a period of years on the same yearly rent, the revenue will remain much the same till the expiry of the present leases, viz. in 1865-66. The present decrease is partly owing to coffee haulut having been substituted for cardamom rent; in one or two instances where exported coffee grown on cardamom jungle has been charged, an amount in haulut equal to or exceeding the cardamom rent whereby the latter rent ceased on the imposition of the former. The decrease from this cause is Rupees 266, and the remaining decrease of Rupees 1,105-0-3 is in the amount realized by the sale of Government cardamoms, viz., such as are picked in isolated unleased localities, or have been zifted as encroachments upon Circar land, or such like causes. But Rupees 1,279-6-7 has been realized from these sources, the remaining revenue arising from cardamom rent.

Sandalwood. The increase under the head sandalwood is more apparent than otherwise; there having been no sales the previous year.

Jungle produce. This head comprises resin, areca-nuts, pepper, tamarinds, and sandal chips; and the increase is owing to a better season for this description (excepting sandalwood chips) of produce.

Nusser kankey and guttee jummah fees. The decrease here is owing to less land having been taken up on jummah tenure. This decrease, however, is a gain rather than loss, as on jummah tenure 5 Rupees per 100 butties only would be realized, whilst on sagoo tenure it is double that amount.

Moturpha. As shewn in paragraph 95, Rupees 6,757-11-10 of the decrease in moturpha is owing to this amount having been transferred to the head of land revenue. The remaining decrease has been caused by remissions in moturpha to persons paying income tax.

Shop tax on market days. The increase in tax on market stalls indicates the thriving state of the seven large weekly bazars held in various parts of Coorg.

Income tax. The working of the income tax has become better understood; this and payments in 1861-62 of the tax due in 1860-61, as well as increased profits, will account for the increase under this head.

This was the first year of the Act coming into operation, or rather stamps were not supplied with the commencement of the operation of the Act, so that these sales do not represent those of a whole year, but only 9 months. As the Stamp Act Rules become more widely known and enforced, this will become a very fertile, unobjectionable, and increasing source of revenue.

Judicial funds.

The increase here requires no comment.

Comprise bees' wax, honey, turmeric, resin, yellow and red bark dyes; and the increase is ascribable to the same causes as given for the increase in jungle produce.

Petty contracts.

The remaining heads do not appear to call for particular remark, excepting that the fee on stamping cloth made by weavers of the Nun-jarajpntich and Yelloosaweraseemay Talooks appears to be an objectionable and worrying tax; and for these reasons, as well as owing to the small amount realized, and to the poverty of the weavers from whom the tax is collected, I would respectfully advocate its abolition.

Fee on stamping cloth.

109. Deducting Rupees 26,942-11-3, sale of sandalwood, and Rupees 3,711-7-6, sale of Judicial stamps, total Rupees 30,654-2-9 (as not admitting of a fair comparison with the year previous) from the net increase in extra revenue of Rupees 60,224-15-7, as above shewn, it leaves a balance of Rupees 29,570-12-10, to which if be added the house tax transferred to land revenue, viz. Rupees 6,757-11-10, the total and *bond fide* increase of extra revenue this year compared with last is Rupees 36,328-8-8. I submit this as a most hopeful and encouraging sign. The extra revenue this past year has overtopped the land revenue; and with the present equitable and popular system of administration, the check to crime, and the growing prosperity of the country, it is expected that the elasticity of the extra revenue will become year by year yet more apparent, and settle the question (seeing how the present light assessment of Coorg has acted beneficially on the extra revenue) so far as Coorg is concerned, that the Resolution of the Government of India concerning the sale of "Waste Lands" is "perpetuity discharged from all prospective demand on account of land revenue. And the permission to redeem the existing land revenue by the immediate payment of one sum equal in value to the revenue redeemed" will not only immensely add to the resources, productions and prosperity of the country by attracting capitalists to the soil, and encouraging present proprietors to work and expend on their own; but as a natural sequence will also still further increase the extra sources of revenue.

Review of the above.

109. The increased and increasing consumption of sea salt in the profits it gives to the Madras Government as a monopoly ought not to be lost sight of in treating of extra revenue. Comparatively little, if any, earth salt is consumed in the district, so that the consumption of sea salt here, where the laboring classes are well paid, and can afford to consume as much as they like, is very considerable, and would add largely and increasingly to the extra revenue of the district, if the profits arose here; and the large exports of coffee from Coorg help indirectly to cheapen the cost of transit of sea salt into the Mysore country and

Salt.

interior, as the handies that carry coffee to Cannanore and Mangalore mostly bring back a return load of salt.

Part III.—Local Funds.

110. There appear hitherto to have been no funds set apart in the district for Municipal purposes and local requirements. Under paragraph 4 of the Commissioner's Circular No. 174, dated 18th May 1862, on the subject now treated of, it may be possible to create a small Municipal fund for sanitary and other requirements of the Town which contributes the funds. The creation of a municipal element of this sort will be very advisable.

111. Regarding the second description of local funds, alluded to in the above paragraph of the Commissioner's Circular, viz., for general district requirements, as no income is derivable here from plough tax or ferry funds, the sole source to look to for the creation of this fund will be "sale of stray cattle."

Sale of stray cattle and fines on cattle trespassing amounted for the past year to Rupees 1,168-11-6. If sanction is accorded, this sum will be appropriated for the purposes contemplated, and this amount, with the 950 Rupees expected revenue from the same source for 1862-63, will enable a fair start to be made. A fund of this sort has been much wanted in Coorg. Coffee planters, sometimes at their own expense, make good roads leading up to their various estates, which, with their assistance and these funds, might be very advantageously extended to the next village, or to meet a neighbouring road; and though the fund is small, and much could not be done in each year, yet if yearly a few miles of bandy road, or even bullock track, were made, a jungle stream bridged, or a well dug, or travellers' chuttram erected, the aggregate of benefit in a few years would be great.

Part IV.—Miscellaneous.

112. The statement below will serve to give an approximate idea of the nature and extent of land alienations, or enams, as also cash payments, with particulars under each head:—

PARTICULARS.	RELIGIOUS.	CHARITABLE.	SERVICE.	TOTAL.
	Estimated amount in Rupees.	Estimated amount in Rupees.	Estimated amount in Rupees.	Estimated total in Rupees.
	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Kham	1,606 5 0	0 0 0	0 0 0	1,606 5 0
Rosoon jagheer or joree	2,949 7 2	12 4 0	2,172 12 11	6,133 8 1
Free jagheer	1,022 5 5	4,262 0 5	5,302 4 0	11,250 10 10
Total	5,577 2 7	4,272 4 5	8,166 0 11	18,002 7 11
In cash	12,800 2 10	0 0 0	1,204 1 7	15,004 5 5
Grand total	18,377 5 5	4,272 4 5	9,370 2 8	32,016 12 4

1. NAME _____
 2. ADDRESS _____
 3. CITY _____
 4. STATE _____
 5. ZIP _____
 6. PHONE _____
 7. DATE _____
 8. SIGNATURE _____
 9. PRINT NAME _____
 10. PRINT ADDRESS _____
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Approximate Statement of gross income of the individual for the year 1954

... ..

very shortly after the emancipation of Robert with. The
attitude of emancipation was met with the greatest
disposable slaves attached to the house. Many of them
slaves after emancipation took up work on their own account and others went out to
well to do cultivators, others accepted work as free laborers, while others, it is believed
through the agency of a person named John, who was a free man, went to the
settled down at Alameda in Cuba, where they have the names of all the free
Christian village. Some of them changed their names to have the
and some had work done for them. Some of them have been by becoming

Christians they would be relieved from work. Thus the good-for-nothing ones have been weeded out, and the working men left. The emancipation of these punnay slaves doubtless bettered the condition of the remaining slaves, numbering some 4,000 at present, attached to private *vurgas* or farms. They are not termed slaves; but "jummah aloo," jummah servants. The more sensible of the Coorgs understand their uncertain position as regards claiming ownership over these men. Their labor is precious, coffee planters are ready to hire or succour them, and other Coorgs are not unwilling to inveigle them away from their masters. The result is an increasing disposition and necessity to care for, if not actually to be kind to them. Some masters may be harsh and ill treat their slaves, and the Coorg Talook authorities may sometimes connive at bringing back runaways; but slowly and surely is their condition bettering, and it may perhaps be safely left to time, to increased intercourse with independent Europeans, and the timely interference of the Superintendent whenever requisite, and more than all to the master's self-interest, gradually but effectively to eradicate the evils of slavery. Slave in the hereditary character implied in the offensive word slave, the "aloo mugga," servant's son, of the Mysore country, is not very different from the "jummah aloo" of Coorg, save the bondage in the former case is concealed under the form of bonded debt. Here it is open, and value of labor and growing public opinion will as effectually make free the one as the other. There is no immorality connected with the present relation of master and jummah servant, and many slaves have their patches of coffee cultivation, and realize the profits for themselves. Their masters doing all they can to attach them to the soil.

116. A considerable amount of miscellaneous revenue business was transacted during the year. Indeed questions concerning breach of contracts, Miscellaneous revenue busi. coffee lands, and coffee cultivation become every day more frequent and troublesome; involving conflicting claims and rights, in proportion of the 10-28 limits of available cultivable coffee land diminish, and applicants increase.

SECTION IV.

EDUCATION.

117. Education seems but little to have been attended to in Coorg till up to a very recent period, viz., in 1857 when the Anglo-vernacular State of education. School, established at Mercara in 1856 by Doctor Moegling, received, on the late Commissioner Sir Mark Cubbon's recommendation to the Supreme Government, a liberal grant-in-aid. This grant is still continued to School, which, besides being the only Educational Establishment of its kind, enjoys, under the management of the present Head Master Mr. Richter, the confidence of the Coorgs and Government Officials, and is in a flourishing condition, which augurs well for its future working, when through more extended Government support and greater interest evinced in education by the inhabitants themselves it will be able to enlarge its sphere of action.

118. The education afforded in the Anglo-vernacular School is sound and practical and a plan has been lately submitted for not only affiliating the Vernacular Schools to it; but making it in a measure supply the place of a Normal School to train up and send out qualified Teachers, as also to properly instruct the 20 Vernacular School Masters, who at present receive a small monthly pittance from Government. If the project is sanctioned, education, under Mr. Richter's able supervision, promises to make its first stride in Coorg.

In connection with the Anglo-vernacular School is a depôt for School books and stationery, and which is the circulating medium for two Canarese publications, 13 copies of which are subscribed for by the scholars alone.

119. There are two drawbacks at present to a better attendance of scholars at this school free. The first being that the Coorgs do not as yet appreciate education so far as not to grudge the payment of a small school fee. The second is the detached nature of the villages and the few families that live in Mercara. Time, self-interest, and insisting upon candidates for Government employ possessing a fair amount of elementary education will doubtless soon tend to remove the first difficulty, whilst for the second a good remedy, and which is already being taken up in some parts of India, has been proposed by Mr. Richter, viz. the establishment of a boarding house in the vicinity of the School. It will be left to the Superintendent to impress upon the Coorgs the necessity of educating their children, and to expose the absurdity and ignorance of some of their ideas, viz. that they have got on very well without education, and so will their children who will get "spoilt" by learning English; and further to point out that they cannot hope to be so generally employed in Government service if they do not keep up in some measure with the times, and it is expected that the more sensible and enlightened Coorgs will subscribe to the erection of a boarding house under their own control to which with scarcely any extra expense to themselves they may send their children from distant villages (now debarred from any education) to be boarded and educated at the School. At present it may be said that those Coorgs only receive education in the Anglo-vernacular School whose parents or friends reside at Mercara. Eventually with a small endowment, indigent children might also be clothed and boarded here, and educated at the School gratuitously, and I do not think it chimerical to state that a properly supervised boarding School of this sort, with healthy recreation, sound teaching, and separated awhile from the baneful influences of their own homes, will give the scholars a healthy rivalry and tone which must lead to good results.

120. The usual prejudice and indifference to the education of girls seems also to exist here. The wife of the Head Master is very anxious to secure some scholars and would give them her best attention. It is trusted that something may be devised to get together some girl scholars,

whose education is as important as that of their brothers. I am told, however, that there are some Coorg and other girls under instruction in private Vernacular Schools.

Attendance at Anglo-vernacular School.

The average daily attendance in the Anglo-vernacular School has been 79 scholars last year against 85 for the year previous.

121. The state of indigenous education will be shewn by the table below, which shows a decrease of scholars; but as hitherto little or no control has been exercised over these schools, the above figures may be taken as only giving approximately the numbers; the attendance be most irregular and fluctuating throughout the year, not only from the usual agricultural and feast day interruptions, but also from the indifference alike of parents, pupils and teachers; and thus education languishes for want of that first fair start which in a country like this can only be effected by Government encouragement, sympathy and support. —

YEAR.	SCHOOLS.			SCHOLARS		
	Canarese.	Persian School at Mercara.	Total.	Male	Female	Total
1861	24	1	25	595	..	595
1862	24	1	25	580	.	580

122. The education afforded in these schools is of the usual primitive and unsatisfactory kind, no books are used, calligraphy and spelling varies with each Schoolmaster, a tedious burdening of the memory with tables and sentences, winding up with the reading and writing of urzees of the description used generally in the Talook and Sudder Cutcheries. Nothing is made attractive in the whole course of study, no other, nor higher object inculcated or thought of than the increased chances of pecuniary gain to the possessor of a small smattering in reading, writing, and accounts.

123. And the status of the Village Schoolmaster is at present very low, and when it is known that 20 out of the 24 Schoolmasters attached to the Vernacular Schools receive only a monthly pittance from Government of 2½ Rupees, less by about half than what the commonest cooly receives as wages for his labor, no wonder will arise at vernacular education being what it is.

124. But four out of the above 20 Schoolmasters are now in training under Mr. Richter at the Anglo-vernacular School, who, when they have passed a satisfactory examination, will resume their village duties on a proposed increased salary of seven Rupees per month, four other

Schoolmasters will then be taken in hand, and similarly rewarded, provided they pass the prescribed examination, and the same course followed with the others. Such is what has been recommended and what it is trusted will be sanctioned. A satisfactory beginning will then be made, the schools and masters will be brought under proper supervision, and the character of both will be raised in the eyes of the people (a subject of much importance as regards the master, who will be much more looked up to and respected as being a fairly paid and recognised Government official), and the system of teaching will become more systematic and rational.

125. In addition to the beforementioned 24 Canarese Vernacular Schools, there are

Private Vernacular Schools.

also about 21 private schools located in the principal towns and haads of the district, supported by the inhabitants, and the average attendance in these schools may be reckoned at from between 357 to 400 scholars daily. The course of instruction here is much the same as that noticed above in the case of the other Vernacular Schools.

126. A Vernacular School exists in Fraserpet, established and endowed by General

Endowed School at Fraserpet.

Fraser with the sum of 250 Rupees, for which a voucher at Mercara allows interest of 3 Rupees which goes for the master's salary. The attendance in this School has been from 15 to 20 scholars daily.

127. A small but encouraging sign to those interested in education is the fact

Evening Lectures.

that some of the older pupils of Mr. Richter, who have left School, attend the evening lectures kindly and gratuitously given by that gentleman, which serves to keep up the remembrance of studies too apt to be forgotten in their uneducated homes.

128. The concern which all seem to partake in these interesting and frank people

General Remarks.

the Coorgs, has perhaps led me to leave other castes in the back ground; but of course the Schools will be open to and are meant for all, and the Coorg will not be always the most forward to take advantage of them. Drunkenness, is, I fear, a prevailing and increasing vice among the Coorg population, and such is their present increasing material prosperity, ushered in since British rule, that it would appear to be a duty owing to them, to give them that education without which their increased comforts and comparative wealth promise to debase and prove a snare rather than an advantage to them.

Again education is advancing with such rapid strides elsewhere that some corresponding efforts ought to be made here, and the codification of Civil and Criminal Laws and Procedures, Stamp and Income acts, and the like, all point out that if the people are to know the Laws they live under, and what are their rights, if Government wish to have a better description of public servant, taken from the people themselves, and if the inhabitants are to make a better use of their increasing prosperity, and bear better the contact with Europeans, now fast gaining in numbers, then must the cause of education be taken up in Coorg, and its progress watched as carefully as its revenue or any other department of the State.

SECTION V.

PUBLIC WORKS.

Part I.—Roads and Bridges.

129. A comprehensive project for further opening up the interior of Coorg, and making additional roads to the coast and Mysore country has lately been submitted to the Commissioner in letter No. 628, dated 31st May 1862, to the Secretary's address. The road at present under construction from Coodlypett to Mercara will be a great boon. All the existing main lines of road are bandy roads; but it is sometimes made a matter of complaint that the Great Ghaut Trunk Roads to Mangalore and Cannanore are not always in good repair, particularly in the rainy weather. It is a novel, as well as encouraging feature, the ready manner in which both Native and European planters have lately come forward to contract for keeping portions of the Great Ghaut Roads in repair, as also the contract system. to construct parts of the Mercara to Coodlypett road. Here where labor is generally difficult to be procured in the pouring rains, and but little work, without strict supervision is done by coolies at that time of the year, a contract system undertaken by persons well supplied with labor, and who are the most interested as having a stake in the Province, in keeping the road in thorough repair will prove very beneficial, and independent of profit by timely attention to repairs, a healthy rivalry will arise between the various contractors, and I may add Government Engineers also, as to the state of repair of their respective portions of road.

130. As noticed before no cross roads have as yet been made from local funds owing to their hitherto non-existence. Mr Mann though has in one respect partially supplied the deficiency, for he has made a fair bandy road of about nine miles in length leading to the Coorg Coffee Company Estates, and which the general public already avail themselves of. This road opens out a large tract of country, where hitherto there has been no road whatever, and which if continued towards Soolea in the Canara district, as contemplated by Mr. Mann, will be a shorter cut by some 15 or 17 miles to the Port of Mangalore. Under certain restrictions and conditions this last road is one where a Government grant-in-aid might be afforded. Other proprietors have also made various smaller roads leading to their estates more or less helping to open out the country, and deserving in some cases of being taken up and extended. In fact in the matter of communications the coffee planters of Coorg have evinced both public spirit and forwardness.

Part II.—Canals and Irrigation.

131 This subject has already been treated of in paragraphs 79 to 82, but there may be some other feasible tank or other ancient projects, which the professional eye of

an Engineer might notice, and the construction of which, with the consequent clearance of jungle, might tend to make the marshy country more salubrious.

Part III.—Civil and Public Buildings.

132. A suitable Post Office would seem to be required at Mercara, instead of the present insignificant rented building. The Jail is incongruously situated, and the accommodation is not nearly enough.

SECTION VI.

POST OFFICE.

133. The general Post lines work well, and so does the Anchay; by a new arrangement Mercara is now in direct Anchay communication with Hassan, the Munzerabad coffee country and Nuggur.

SECTION VII.

ELECTRIC TELEGRAPH.

134. The extension of the line from Mercara to Mangalore would be a boon to the trading interest here. All Messages from Mangalore have to be despatched by post to Mercara, and thence sent on to their destinations. Independent of the advantages to the Mangalore people by the extension, the European settlers and others here, especially those connected with coffee, rice, and cardamom transactions, would make frequent and I think a paying use of the line, and *vice versa* and without this line the traders and settlers of this province labor under a great disadvantage from want of prior shipping intelligence, and the rise and fall of prices on the coast.

SECTION VIII.

RAILWAY.

135. The extension of the Madras Railway line to Beypoor as a natural consequence benefits Coorg, Mercara being about 168 miles distant from Beypoor, *via* Telli-cherry and Calicut; and a traveller to Madras might also pick up rail; *via* Mysore, Chamrajnuggur, and the Hassanoor Ghaut, at the Avanashe station, in the Coimbatour District, distant about 182 miles from Mercara, and am not certain but that this latter route, if open throughout, would not be the preferable one during the rains.

SECTION IX.

FINANCE.

136. The following table particularizes the total expenditure, ordinary and extraordinary, for the year under report :—

PARTICULARS.		1900-01.	1901-02.	Increase.	Decrease.
GENERAL.		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Establishment of Coorg Commissioner		2,076 0 0	2,076 0 0	....	..
JUDICIAL.					
Durvaft Cutcherry	...	576 0 0	576 0 0	.....	..
Jail fixed Establishment	...	1,394 0 0	1,390 15 4	....	5 0 6
Cutwala' Choultry	...	2,368 0 0	2,367 15 11	....	0 0 1
Cases	...	130 0 0	120 0 0	....	..
Contingencies	...	2,616 0 0	2,607 15 2	181 15 2	..
Total Judicial	...	5,116 0 0	5,312 14 5	191 15 2	5 0 9
Net Increase	...	.....	.....	178 14 5	..
REVENUE.					
Superintendent	...	10,096 0 0	12,000 0 0	1,914 0 0	..
English Writers	...	4,740 11 10	4,764 0 0	23 4 2	..
Dewan Cutcherry	...	9,046 0 0	9,768 9 7	..	120 14 5
Treasury	...	1,320 0 0	1,330 0 0	..	..
Talook Establishments	...	21,324 5 11	21,367 1 9	43 11 10	..
Servants in Travellers' Bungalows	...	1,546 0 0	1,736 0 0	..	..
Coffe Hauls Establishment	...	1,328 1 1	1,320 0 0	91 14 11	..
Total Revenue	...	60,411 10 10	61,736 11 4	1,321 14 11	120 14 5
Net Increase	...	..	..	1,345 0 6	..
Posts (Anchay)	...	2,901 1 6	2,804 0 0	2 14 6	..
Miscellaneous	...	6,320 9 9	7,709 8 4	1,478 14 7	..
ENDOWMENTS TO RELIGIOUS PLACES OF WORSHIP.					
Devustana	...	13,800 3 10	13,800 3 10	..	..
Catholic Priest at Veerajendrapett	...	240 0 0	240 0 0	..	..
Total	...	14,040 3 10	14,040 3 10	..	..
PENSIONS.					
Ra-Rajah's family	...	6,613 8 0	6,444 0 0	..	168 8 0
Pensions on account of Canara Insurrection	...	4,760 0 0	5,930 0 0	1,190 0 0	.....
Superannuation Pension	...	.....	312 14 5	312 14 5	..
Total Pensions	...	11,373 8 0	12,710 14 5	1,337 14 5	168 8 0
Net Increase	...	.....	...	1,337 6 5	..
MEDICAL.					
Servants' wages, Medical Department	...	2,452 0 0	1,452 0 0	..	..
Dispensary Establishment	...	840 0 0	840 0 0	..	..
Total	...	3,292 0 0	2,292 0 0	..	..
Educational Institutions	...	3,870 0 0	3,870 0 0	..	..
Total Ordinary	...	1,08,111 1 11	1,08,462 4 4	4,341 3 5	..
EXTRAORDINARY	Department Public Works	11,536 8 1	14,646 10 0	3,110 4 11	.....
	Grand Total	1,19,647 7 0	1,23,108 14 4	7,461 7 4	.....

137. The increase shown in Judicial contingent charges is owing to the increased cost for dieting, clothing, &c., the Jail prisoners, who averaged 16 more this than the year previous, (see paragraph 38). The actual increase owing to this cause is nearly double the increase now shown, so that in reality there has been a decrease effected generally in general Judicial contingent charges. The main items of increase in revenue charges are Superintendent's pay and Coffee Haulut Establishment, owing, as regards the Superintendent, to his staff corps salary also being included this year in Civil charges. Two extra shroffs were temporarily sanctioned for the Coffee Haulut Establishment, whose salaries amount to Rupees 56; and taking these additional items of expenditure into account, it will be seen that under this head also there has been in reality a slight decrease. The increase in miscellaneous charges can also be satisfactorily accounted for. The expenses on cutting and collecting the sandalwood sold this year amounted to Rupees 663-6-10; and whilst formerly the Commissariat Department at Hoonsoor furnished carriage for the Superintendent's Catcherry dusters, office tents, &c., for four months, and charged accordingly, the cattle have now been sent here, and their keep is chargeable the whole year round. The increase from this cause is Rupees 818-13-2. And whilst formerly the Commissariat Department paid the Government allowance of 600 Rupees a year for the dieting of paupers in Civil Dispensary, &c., it is now paid by the Civil Department, and the extra charge under this head this year, and not appearing last year, is Rupees 600,—total Rupees 2,082-1-0.

These are extra charges for the year, so that there has been no real increase upon last year's charges, but the reverse. The decrease in pensions to Ex-Rajah's family is owing to one of the members having died. The increase of Rupees 1,190 in pensions, on account of the Canara insurrection, is owing, that whilst formerly these pensions were payable half-yearly, they are now paid quarterly, and the above Rupees 1,190 represents the additional quarterly payment that has come into this year's accounts. The superannuation pension is a fresh charge altogether, viz. pension to the late Treasurer. I am unable to give particulars of the increase in the Public Works expenditure; but it is doubtless owing to the construction of the new line of road from Mercara to Coollypett.

Abstract statement of expenditure.

1,341-2-5 in ordinary

General results.

138. The table below gives the same particulars in another form, and although there is an increase of Rupees 1,341-2-5 in ordinary or controllable expenditure, yet for the reasons shown in the preceding paragraph, and, independent of those reasons, looking at the net increase in the revenue of the district, the

increase in ordinary charges does not appear disproportionate. The increased expenditure in the Public Works Department is perhaps a matter of congratulation :—

PARTICULARS.			1860-61.	1861-62.	Increase.	Decrease.
ORDINARY.			Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
General	Charges	...	2,676 0 0	2,676 0 0	0 0 0	...
Judicial	"	...	8,136 0 0	8,312 14 5	176 14 5	...
Revenue	"	...	50,411 10 10	51,756 11 4	1,345 0 6	...
Miscellaneous	"	...	6,320 0 9	7,799 8 4	1,478 14 7	...
Postal	"	...	2,901 1 6	2,904 0 0	2 14 6	...
Medical	"	...	2,292 0 0	2,292 0 0	...	...
Pension	"	...	11,373 8 0	12,710 14 5	1,337 6 5	...
Educational	"	..	3,870 0 0	3,870 0 0	...	...
Roman Catholic Priest		...	240 0 0	240 0 0	...	..
Endowments to religious places of worship		...	13,890 3 10	13,890 3 10	...	...
Total Ordinary		...	1,02,111 1 11	1,06,452 4 4	4,341 2 5	...
EXTRAORDINARY.						
Department Public Works		...	11,536 5 1	14,646 10 0	3,110 4 11	...
Total Ordinary and Extraordinary		...	1,13,647 7 0	1,21,098 14 4	7,451 7 4	..

139. The financial results, therefore, leave a sum of Rupees 2,31,129-11-6 in favor of receipts or actual surplus for the year under report, whilst the surplus for the year previous was but Rupees 1,70,010-4-8.

140. Next year there is every probability of a similar, most likely greater, surplus ; whilst the exceptional causes increasing ordinary charges will not operate, and which it is trusted will admit of some small increased expenditure in additional Establishment, and increased pay to a portion of the present English Department which is short-handed and overworked.

SECTION X.

POLITICAL.

141. The following, though scarcely having any political significance, may appropriately come in under the above head. At the former Rajah's palace in Nacknaad, the scene of barbarous atrocities shortly before the last Rajah's deposition, situated about 20 miles from Mercara, resides Neelamajee, daughter of Mullay Ursur of Hormulnaad, a distant relative of Dodda Veerajender, but whose family is now altogether extinct; and an illegitimate grand-daughter of Dodda Veerajender named Neelamma Neelamajee, after her conversion to Mahomedanism, became one of Tippoo Sultan's wives, and after the taking of Seringapatam by the British she came to reside at Nacknaad, and was supported by her relatives the then Rajahs. Since the deposition of Veerajender she has been maintained by a monthly pension from the British. Neelamajee must now be upwards of 90 years of age.

In addition to Neelamajee, at Appagolla in Koinherry Naad, reside Davamajee and her husband Chennabassapah. Davamajee is the sister of the late deposed Rajah, and her husband, though a Lingayat, was formerly a Coorg, though of no particular family, and poor. He was made a Lingayat by Lingarajender, who married him first to one daughter, and after her demise married him again to another daughter of his, viz. the present Davamajee. These are the Devamajee and Chennabassapah, who in 1832 fled the Coorg country to save their honor and lives, and sought the protection of Mr. Casanmajor, Resident of Mysore. The Rajah demanded the restoration of the fugitives, the request was not complied with; they had revolting tales to tell, which led to enquiries, and a visit from the Resident to Coorg, ending in open rebellion on the part of the Rajah, and the taking possession of his country in 1834. Devamajee and Chennabassapah enjoy a jagheer, and are also in receipt of a pension from the British. They have one son about 11 years of age, and three daughters; one of them, widow of a Canara Poligar, now resides with her parent, and the other two daughters are married to a pensioned Poligar residing in Bangalore. One only, I believe, has a daughter aged but a few months. Chennabassapah possesses no influence among the Coorgs.

SECTION XL.

MISCELLANEOUS.

Population.

142. The population returns give a grand total of 119,352 souls, being less by 328 persons than the year previous. The decrease is thus accounted for—

Persons leaving Coorg numbered	...	...	...	8,184	souls.
Do. emigrating into Coorg	...	...	...	6,843	„

Decrease being ... 1,341 souls.

Births for 1861-62 ... 4,593

Deaths for „ ... 3,580

Increase of births over deaths 1,013 Deduct 1,013

Net decrease 328

The deaths give a percentage of three to the population. The percentage of births is about 3½ to ditto.

But from 130,000 to 140,000 souls is supposed to be the more correct census for Coorg, and this will slightly, and perhaps more correctly, modify the averages regarding litigation and crime to population, given in paragraphs 10, 11 and 23. The table below may not prove uninteresting :—

PARTICULARS.	CENSUS.			Percentage of increase from 1839 to 1861-62.
	1839	1856	1861-62	
Coorgs	17,096	..	23,311	37
Other castes	64,341	..	95,011	49
Total	81,437	111,890	118,352	43

which shows that in 22 years the Coorgs have increased by 37 per cent., and other castes in about the same proportion, the remaining increase of 12 per cent. being perhaps safely ascribable to emigration.

EMIGRATION.

143. Numbers of Mysore and Wynaad people, chiefly of the jungle tribe, yearly migrate to Coorg, and chiefly into the Kiggutnaad Talook, for the purpose of assisting in harvesting the extensive rice crops, after which they return to their own homes. A

constant stream of coolies and laborers may be said to be entering and leaving Coorg at all times of the year, connected with the numerous coffee estates scattered over the country. But few of these coolies remain for good in the district, or beyond the working seasons; but altogether, though paragraph 112 shows an actual emigration from the district, I think this either to be incorrect or exceptional, and that Coorg, from coffee cultivation and other causes, annually receives a slight addition to its population from emigrants settling in the country.

AGRICULTURE.

114. The usual primitive but generally successful system of agriculture obtains

Rice culture.

here as in other parts of India. The only plough cultivation worthy of notice is that of rice, and though the bullocks

are wretched, and the implements used very simple, yet rice lands are generally manured and carefully prepared for the seed. This and a naturally fertile soil, and exemption from drought (which places the agricultural community here in a far better and safer footing than their brethren on the plains) generally results in a very good rice crop, which, after deducting for home consumption, leaves a large margin for export. The value of the rice crop last year may be estimated at not less than 15 lakhs of Rupees. Plantains

Plantains, oranges, and cardamoms

and oranges are considerably exported from Coorg. The

cardamom of Coorg is much esteemed "on account of its aroma, which is much superior to those raised in gardens in Mysore and elsewhere. An account of this singular branch of jungle-horticulture is given in the Coorg Memoirs. In the forests leased out for cardamom cultivation the steepest declivity of the hill are chosen for cardamom grounds. The steep must face west, or, still better, north, for the east wind and the sun are noxious. On the higher edge of the chosen ground one of the largest trees is selected for the operation of shaking the ground. The slope below to a length of 250 or 350 feet, according to the height of the tree, is cleared of brushwood, thorns and weeds. This done, a platform is erected between the mountain side behind the tree and its stem, at a height of about 12 feet. The tree is cut which falls from the height of its trunk down the mountain slope, top foremost, carrying with it in the great crash a number of smaller trees, and rushing on a long way towards the valley below. The sound of the tree striking the earth resembles the discharge of cannon, or a peal of thunder. The ground trembles, and the work is now done for the present. Within three months cardamom plants show their heads, as fern do on newly cut ground, all over the space shaken by the fall of the great tree. They rise during the first showers of the monsoon, and grow to a height of two or three feet in the first rainy season. The ground is then once more carefully cleared of weeds, thorns and small bushes, which may have sprung up during the monsoon. The cardamoms must not be disturbed. The garden is left alone again for a year. In the month of October of the second year after the felling of the tree, and in the 20th month of the plantation, the stocks have reached mau's height. A party sets out to clear the whole ground thoroughly the third time. After six months more, in April, the fruit-bearing small branches shoot forth from the bulk, they are covered with clusters of beautiful lion-mouthed blossoms, and afterwards with oval triangular capsules.

Other five months pass, when in October the first crop is gathered. The first full harvest, however, is collected only a year afterwards. The harvest continues good for six or seven years. When the crops begin to decline, another large tree must be cut down on the plantation. The whole business from, as it appears to the Coorg, the seedless springing up of the plants to the gathering of the crop is strangely mixed up with superstitions. Thus are spicy cardamoms grown in Coorg glens never penetrated by the sun's rays during the cloudless winter, or the gloomy monsoon."

145. The revenue derived from cardamom plantations, according to the Memoirs, is stated in the Rajah's time to have been Rupees 80,000 annually. At the onset of British rule the revenue at one time was but 4,000 Rupees; in 1855-56 it was Rupees 7,741-7-0; from 1856-57 up to the present time, with slight variations, the revenue averages nearly the same; (the forests having been leased out for a term of 10 years, which expires in 1865-66, viz., from 27,000 to 29,000 Rupees and upwards yearly. It is hazardous to state how or for what term of years these forests* will again be leased out, seeing radical changes may be

Cardamoms continued. effected before then; but if again leased out similarly as now, a sum of Rupees 7,846-7-11 will have to be deducted from the present cardamom revenue, as being the rent of forest, where permission has been accorded to plant coffee. This, however, will only be changing the head of revenue, and the amount,* under coffee cultivation, will most likely increase. If cardamom forests are again similarly leased out, it is estimated from the growing value of cardamoms, and competition for coffee lands and other causes, that the rise in the leases will be about 70 per cent. Already several lease-holders of cardamom forests have realized considerable sums in transferring their leases to others for coffee cultivation purposes. A rough guess gives the value of last year's cardamom crop at about 2 lakhs of Rupees. The cardamom leases are all held by natives, with the exception of a few lately made over for a consideration to Europeans for coffee cultivation.

146. The following table will serve to illustrate how from small beginnings coffee cultivation has grown to dimensions which, with the present rise in prices, promise in a few years to eclipse every other description of revenue in Coorg, save abkarry, which grows and increases with the cultivation of coffee :—

Year	REALIZATIONS FROM COFFEE HARVEST														
	From Europeans.			From Natives			Total			Yearly Increase.					
	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.	Rs.	As.	P.			
1857-58	136	1	4	11,447	12	1	11,583	13	5	0	0	0
1858-59	460	15	7	16,254	10	4	16,715	9	11	5,131	12	6
1859-60	1,941	9	6	23,997	3	2	25,941	12	8	11,226	2	9
1860-61	2,797	5	1	23,302	15	1	32,103	2	2	4,161	5	6
1861-62	5,369	6	11	35,075	14	10	38,445	5	9	6,342	8	7
Total	8,798	4	5	1,18,081	7	6	1,26,789	11	11	26,861	8	4

Even as regards the native coffee, it will be seen that its extended cultivation could not have commenced much before the first advent of Europeans. European cultivation is yet in its infancy; and but one estate in full bearing, giving a crop that will justify favorable anticipations as regards other estates. In the course of a very few years more there is no doubt, under present circumstances, that the European cultivation and yield will come up to, if not overtake, the present native coffee returns, whilst native cultivation may also be expected to go on increasing in about the same or perhaps a greater proportion than it now does.

147. As the haulut charged on coffee amounts to 4 annas per maund, a Rupee of revenue under the head of coffee haulut may be taken as representing a cwt. of exported coffee. As little coffee, perhaps not more than 100 maunds, or 100 cwt., is consumed within the district, the amount shewn in the table in the preceding paragraph may be taken as the total production of coffee in the province. Coorg then exported last year 38,145 cwt., or 1,022 tons of coffee, worth on the spot some 8½ lakhs of Rupees, on the Coast some 11 lakhs, and in the English market some 15 lakhs of Rupees. It is hardly possible to give even approximately the number of acres under coffee cultivation at present, as great part of it is grown on the banay of jummah and sagoo land, considered as already taxed, and a further portion is unsurveyed cardamom jungles; but a rough statement prepared in the office of coffee cultivation in other localities, save the above, viz. in pycaree or Sircar jungles, shows that about 49,160 butties, or 2,904 acres (the dry land butty is here calculated at 6 acres per 100 butties) of land, have been taken up by Europeans, of which 15,500 butties, or 918 acres of land, are at present cultivated; and that about 174,715 butties or 10,302 acres of land have been taken up by natives, of which about 8,025 butties, or 480 acres of land are at present under cultivation. These latter figures show that under the present coffee rules, with no land tax, holders of land ought to be required to cultivate the same, under certain penalties, if necessary, within a certain number of years. European planters now hold Rupees 5,111-10-11 of cardamom forest, the greater portion of which is planted with coffee not yet in bearing, 6½ cwt. per acre is considered a fair yield in Ceylon, and one European planter's estate in Coorg is supposed to have yielded about 6 cwt. per acre last year, but taking 3 cwt. as the average yield all round per acre, it shows that about or under 13,000 acres of land are at present cultivated with coffee, returning Rupees 38,145-5-9 to Government, and from 9 to 15 lakhs of Rupees to the grower, according to where the coffee is sent. 62,000 acres of wet land may be said to be under rice cultivation, returning to Government Rupees 1,30,156-5-7, and to the growers 15 lakhs of Rupees, whilst cardamoms paid Rupees 27,964-9-10 to Government, and returned 2 lakhs of Rupees to the cultivators. As five times more land is under rice than coffee cultivation, in the same proportion the revenue to Government from rice cultivation ought to be some Rupees 1,90,000 and odd, still the charge on coffee cultivation in a land tax point of view is somewhat proportionate to the tax on paddy lands, whilst the same extent of land under coffee will produce a crop valued at nearly five times the amount as if sown with paddy. Coffee production in Coorg is now within, I believe, 1/6 of what it is in Ceylon. Of the 38,145 cwt. of

coffee exported this year, 27,000 cwts. or more was shipped at Cannanore, in the Malabar District. This exportation, I believe, is sometimes confounded with and placed to the credit of the Wynad and Malabar planters, who are stated to have exported 73,915 cwts. in 1860-61.

FORESTS AND ARBORICULTURE.

148. There are extensive forests in various parts of Coorg abounding in teak, blackwood, ebony, honnay and other valuable timber. Poon trees, used as ship spars, are also comparatively abundant; as also sandalwood in the lower table lands of the district. The forests of Coorg have never been systematically worked or conserved,—the consequence being wastage, pillage, and loss of timber sale revenue to Government. On account of the nature of the country the difficulty of getting and putting out timber is great. Poon spars, for this and other reasons, are standing comparatively valueless in the forests, which, if transported to Bombay, would fetch upwards of 1,000 Rupees each; but as the subject of an efficient forest conservancy for Coorg is now engaging the Commissioner's attention, there is no need of entering here into further particulars under this head.

MINING.

149. There are no discovered mines in the district, nor is iron manufactured.

SURVEY.

150. A survey establishment in connection with the fee simple and waste land rules is shortly expected to be granted to Coorg.

DISPENSARY.

151. The number of patients treated in the Civil Dispensary is given in the table below. The prevailing diseases during the year were fevers, bowel complaints, rheumatism and catarrh :—

PARTICULARS	Remained from last year.	Admitted in 1861-62.	Total.	Died.	Average daily number of sick.
In-patients	1	73	74	16	23
Out-patients	14	957	971	0	13
Total	15	1,030	1,045	16	

The inconvenient and distant locality of the Dispensary diminishes in a great measure its utility, particularly in the rains, or else there would be a larger number of patients to show. A plan will be separately submitted for removing the Dispensary

into the Pettah, when no doubt it will be much more resorted to. Independent of medicines, the annual cost to Government of this institution is Rupees 1,440, but the benefits the Dispensary affords are great, particularly to low land coolies and emigrants, who are so liable to be stricken down by the fever and other prevailing diseases of Coorg.

VACCINATION.

152. The vaccination returns for the year under report, as also those for the year previous, are as follows :—

	Number vac- cinated	Successful	Failures.
Total number vaccinated in 1861-62	1,874	1,707	167
" " in 1860-61	1,708	1,516	192
	<hr/> 166		

which shows an increase by 166 over the previous year's number, and a smaller percentage of failure. The prevalence of small-pox in a few villages of Coorg for the year under report has been noticed in paragraph 90.

CONCLUSION.

153. It is feared that this Report will be found somewhat sketchy and superficial in its details; and it is hoped that any inaccuracies and shortcomings will be excused on the ground of short time of being in charge. I am indebted for much information to the intelligent Manager Ragavachary. The English Office and Mr. Ball have performed their duties satisfactorily. The Head and Naib Sheristadars, M. Appachoo and K. Appiah, are diligent in the performance of their duties, and the departments over which they respectively preside have generally given satisfaction.

SUPDT.'s OFFICE, FRASERPETH; }
The 30th June 1862.

L. RICKETTS,
In temporary charge of Coorg.

(Signed) L. BOWRING,
Commissioner.

ON THE COORG BUTTY.

It is difficult to give a clear idea of the extent of a butty of wet land,—a butty not being a land measure, but one of capacity, holding 80 seers; and as fields were assessed according to the nature of the soil, a small but fertile field of say an acre might yield 100 butties of paddy, and be called 100 butties of wet land, and pay assessment as such; whereas in another locality, or even in neighbouring fields, double or perhaps treble the extent of land would only yield the same quantity, viz. 100 butties of paddy, which also would be called 100 butties of land, and pay assessment accordingly. The mode of ascertaining the number of butties of paddy each field yielded was this: The whole field was first surveyed, and the extent of land ascertained. A 16 feet square of this field was then (with a bamboo stick, 16 feet in length, called “aluttee ghuz” or “aluttee khole,” viz. measuring yard or khole) demarcated at harvest time, and the number of seers of paddy produced on the square was measured out and ascertained, and the whole field was then charged with the same proportion of crop as the square produced. It follows, therefore, that a given number of butties of land is not decisive as to the real extent of the land, unless the quality of the field is known, i. e. how many seers were originally fixed as the yield for each square of 256 feet. There are seven different qualities of fields ascertained, or supposed, to produce 8, 10, 12, 14, 16, 18, and 20 seers respectively on each square of 256 feet; therefore 100 butties of land may be taken to represent a land measurement of from 1 to 6 acres, according to quality, the average calculation would be about 3 acres, or, safer to reckon, about 2 acres to every 100 butties.

I am indebted to Mr. Richter for this information.

L. RICKETTS,

In temporary charge of Coorg.

(Signed) L BOWRING,

Commissioner.

